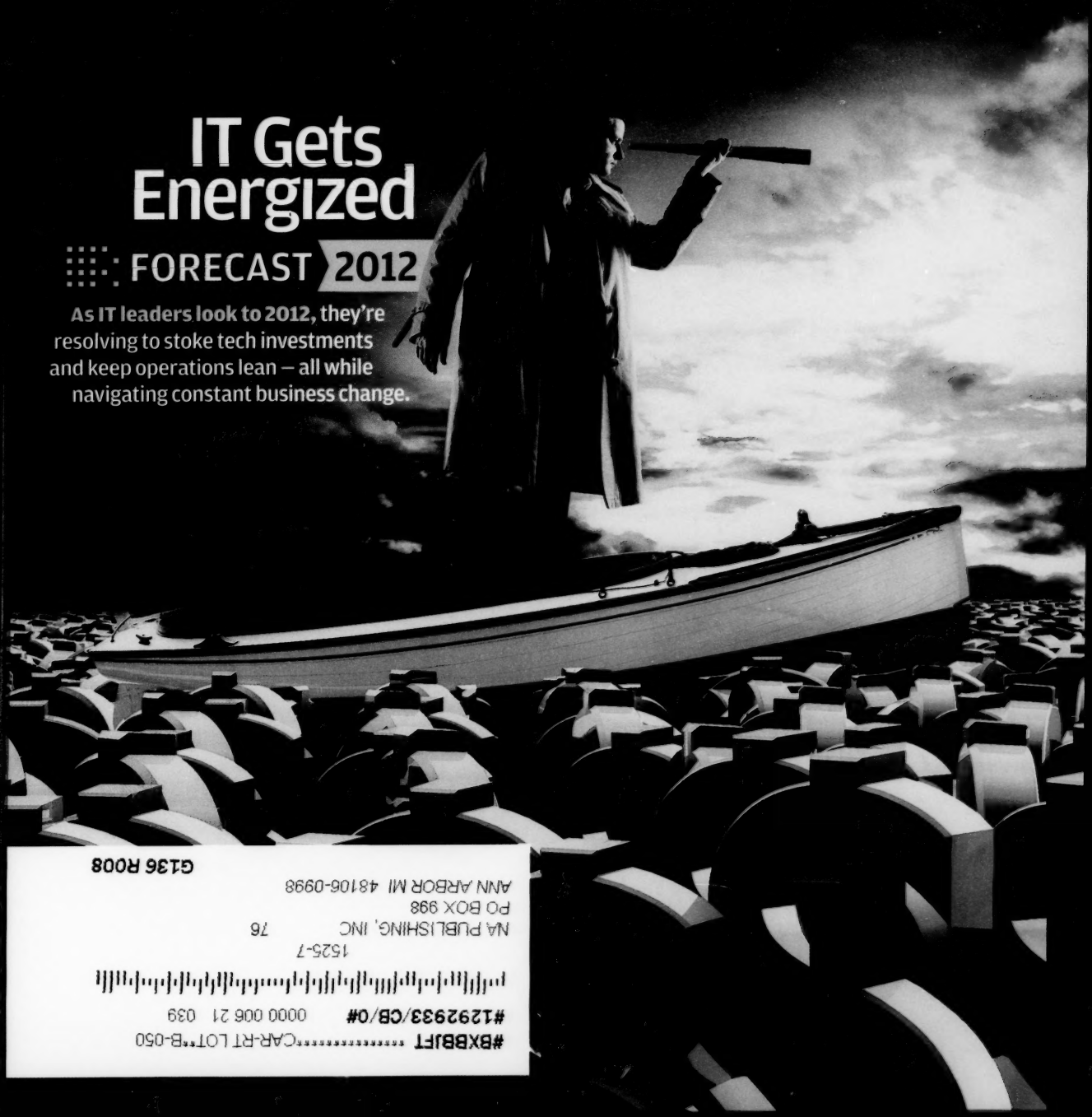
Also inside: Android is smartphone king
Keeping IT skills current | Post-9/11 data centers

COMPUTERWORLD

Peer Perspective. IT Leadership. Business Results. | COMPUTERWORLD.COM | SEPTEMBER 26, 2011



IT Gets Energized

FORECAST 2012

As IT leaders look to 2012, they're resolving to stoke tech investments and keep operations lean – all while navigating constant business change.

G136 R008

#BXBBJFT ********CAR-RT LOT**B-050
#1292933/CB/0# 0000 006 21 039
1525-7
NA PUBLISHING, INC 76
PO BOX 998
ANN ARBOR MI 48106-0998

YOU NEED IT.
WE GET IT.

HP ProLiant DL360 G7 Rack-mount Server

CDW 2090731

- Quad-Core Intel® Xeon® processors E5506
- Memory: 6GB std., 384GB max.
- Hard drive: none ship std.; up to eight SFF hot-pluggable SAS/SATA drive bays available
- 4MB Level 3 Cache

$2314.99

vmware

VMware® vSphere™ 5

- Enables users to run business-critical applications with confidence and respond faster
- vSphere™ accelerates the shift to cloud computing for existing data centers
- Underpins compatible public cloud offerings, paving the way for the only hybrid cloud model

CALL FOR PRICING

System Center
Virtual Machine Manager

Microsoft

Microsoft® System Center Virtual Machine Manager R2 2008

- Manages physical and virtual IT environments
- Maximizes data center resources
- Provides rapid provisioning and agility
- Leverages data center expertise

CALL FOR PRICING

Technology. The tools that keep work flowing. Champions of productivity, connectivity and reliability. With hundreds of thousands of products from top vendors, we have it all. Along with dedicated account managers to find it. Services to support it. One of the largest in-stock inventories to get you what you need when you need it. All you have to do is call or click.

800.399.4CDW | CDW.com

CDW® PEOPLE WHO GET IT™

Offers subject to CDW's standard terms and conditions of sale, available at CDW.com. ©2011 CDW LLC. CDW®, CDW·G™ and PEOPLE WHO GET IT™ are trademarks of CDW, LLC.

COMPUTERWORLD

P.O. Box 9171
492 Old Connecticut Path
Framingham, MA 01701-9171
(508) 879-0700
Computerworld.com

EDITORIAL

Editor in Chief
Scot Finnie

Executive Editor
Julia King (events)

Managing Editors
Sharon Machlis (online), Ken Mingis (news), Bob Rawson (production)

Director of Blogs
Joyce Carpenter

Art Director
April Montgomery

Technologies Editor
Johanna Ambrosio

Features Editors
Valerie Potter, Ellen Fanning (special reports), Barbara Krasnoff (reviews)

News Editors
Mike Bucken, Marian Prokop

National Correspondents
Julia King, Robert L. Mitchell

Reporters
Sharon Gaudin, Matt Hamblen, Gregg Keizer, Lucas Mearian, Patrick Thibodeau, Jaikumar Vijayan

Editorial Project Manager
Mari Keefe

Senior Associate Online Editor
Ken Gagné

Office Manager
Linda Gorgone

Contributing Editors
Jamie Eckle, Preston Gralla, Tracy Mayor

CONTACTS

Phone numbers, email addresses and reporters' beats are available online at *Computerworld.com* (see Contacts link at the bottom of the home page).

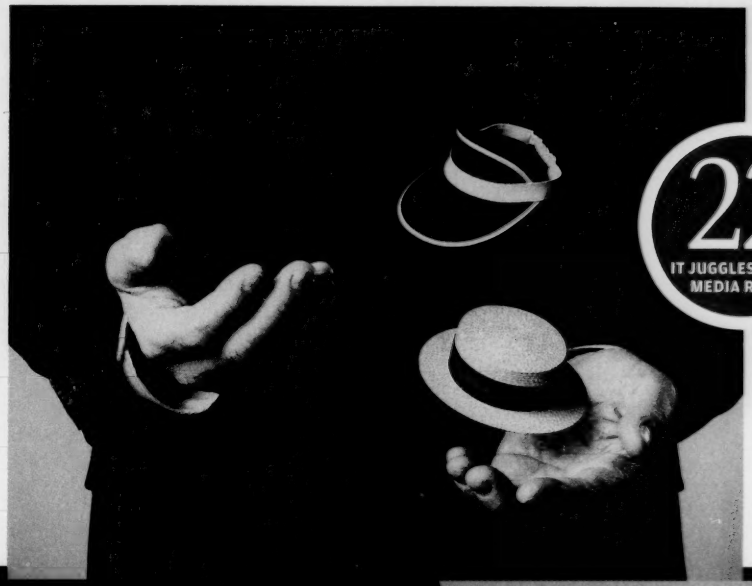
Letters to the Editor
Send to letters@computerworld.com. Include an address and phone number for immediate verification. Letters will be edited for brevity and clarity.

News tips
newstips@computerworld.com

Subscriptions and back issues
(888) 559-7327, cw@omeda.com

Reprints/permissions
The YGS Group, (800) 290-5460, ext. 100, computerworld@theygsgroup.com

THIS ISSUE | 09.26.2011 [VOL. 45, NO. 17 $5/COPY]



FORECAST 2012

SPECIAL REPORT

IT Gets Energized

16 As tech budgets edge up in 2012, IT leaders look to shake off the recession and shift spending to new development – but with an eagle eye on the bottom line.

IT Juggles Social Media Roles

22 As social media use expands, does IT play implementer, cop, manager or all of the above?

The IT Shuffle

28 IT departments must constantly reshape their roles to keep pace with technology. But do reorgs get the results management hopes for?

9 Hot Skills For 2012

32 Tech hiring ticks up for the third straight year, and IT pros with programming skills will be first in line for jobs.

OPINION | 36 Thornton A. May says IT executives face four critically important technology learning curves in 2012: big data, social media, mobility and the cloud.

HEADS UP | 2 Full-duplex tech could double wireless traffic. | The NSA aims to **secure big data.** | **4 IBM's Watson** ventures into medicine. | **Android** leads the smartphone market.

NEWS ANALYSIS | 6 9/11 shed light on **data center security** needs. | **8 IT jobs abound** in healthcare – for those with the right skills.

OPINIONS | 14 Bart Perkins thinks "games with a purpose" could have a purpose in IT. | **40 John Halamka** ponders how IT managers can cope with "decision fatigue."

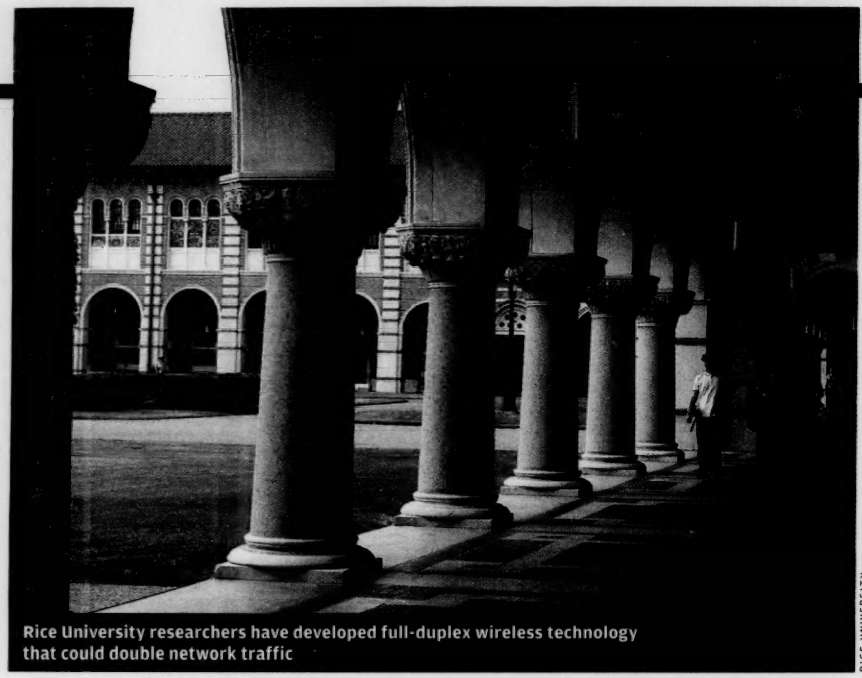
DEPARTMENTS | 10 The Grill: Teens in Tech founder Daniel Brusilovsky | **39 Shark Tank:** Data in, data out ... the window.

FOR BREAKING NEWS, VISIT COMPUTERWORLD.COM

GETTY IMAGES / MARK HOOPER

Fresh Insights
New Trends
Great Ideas

HeadsUp



Rice University researchers have developed full-duplex wireless technology that could double network traffic

RICE UNIVERSITY

EMERGING TECHNOLOGY

Full-Duplex Boosts Network Traffic

RICE UNIVERSITY researchers have developed full-duplex wireless technology that they say could double network traffic — at a low cost, with little need for new hardware and without much disruption in service.

Full-duplex allows a cell phone or other mobile device to send and receive data on the same frequency. Today's networks require separate frequencies for each action.

One downside is that the national wireless carriers aren't ready to roll this out, and may not be for several years. Though full-duplex technology doesn't need new cell towers, it does require new industry standards.

The earliest it would be implemented is most likely with 5G, or fifth-generation, networks. Most major U.S. carriers are just starting to deploy 4G networks — though Sprint's WiMax 4G network is more fully developed than competing offerings.

Still, Ahutosh Sabharwal, a Rice professor of electrical and computer engineering, remains optimistic.

Rice researchers have proven that phone makers can add full-duplex to existing smartphones. They were also able to repurpose existing MIMO (multiple input, multiple output) antenna technology.

Further, Sabharwal's team showed that full-duplex systems can operate in asynchronous mode, meaning that one node can start receiving a signal while it's transmitting.

Rice has invited researchers from other organizations to add their full-duplex innovations to the mix.

– Matt Hamblen

DATA SECURITY

NSA Label-based System Could Secure Big Data

The National Security Agency has submitted its new, label-based data store software to the Apache Software Foundation, in hopes that others will further develop it for use in secure systems.

Called Accumulo, the software uses "expressive, fine-grained" labels that can tag each cell in a data store. Security policies can then be applied to the individual labels to, for example, allow an external server to access some cells but not others.

Based on Google's Big Table design, Accumulo is a simple key/value data store, where providing the system with the key will return any data associated with that key. Featuring a distributed design, Accumulo can be run across multiple servers, making it a good candidate for managing big data systems, the NSA said.

"The access labels in Accumulo do not in themselves provide a complete security solution, but are a mechanism for labeling each piece of data with the authorizations that are necessary to see it," the NSA said in its proposal to Apache.

With improvements from other developers, Accumulo could be capable of serving as the foundation of data stores used by healthcare companies, government agencies and other organizations that must meet stringent security and privacy requirements, the NSA said.

COMPUTERWORLD.COM

– JOAB JACKSON

DB2 on POWER: 3x faster. Check. As low as 1/3 the price. Mate.

Which database has the right moves? DB2® on Power Systems™ performs three times faster per core than Oracle Database on SPARC—based on both TPC-C and SAP® SD benchmarks.* Yet the price of DB2 is as low as 1/3 the price of Oracle Database.** Maybe that's why in 2010 over 1,000 Oracle Database clients chose DB2 instead. Game over.

ibm.com/facts

*PERFORMANCE: www.tpc.org as of 3/28/11 [IBM Power 780 (3 x 64 C/24 Ch/192 C/768 Th): 10,366,254 tpmC; $1.38/tpmC; avail. 10/13/10 v. Oracle SPARC SuperCluster w/T3-4 Servers (27 x 64 C/108 Ch/1728 C/13824 Th): 30,249,688 tpmC; $1.01/tpmC; avail. 6/1/11]. TPC-C is a trademark of Transaction Performance Processing Council. 2-tier SAP SD standard application benchmark results as of 3/28/11 [IBM Power 795 (32 P/256 C/1024 Th): 126,063 users; SAP ERP 6.0 EhP4; AIX 7.1 + DB2 9.7; cert. 2010046 v. Oracle SPARC Enterprise Server M9000 (64 P/256 C/512 Th): 39,100 users; SAP ERP 6.0/Solaris 10, Oracle 10g; cert. 2008042] www.sap.com/benchmark. SAP and all SAP logos are trademarks or registered trademarks of SAP AG in Germany and several other countries. **PRICE: based on publicly avail. U.S. info on 2/10/2011 for IBM DB2 Advanced Enterprise Edition + Oracle software w/comparable capabilities. No SAP SD benchmark results are used for any price/performance metrics. IBM: 100 Processor Value Units. Oracle: assumes 1.0 processor multiplier. Both incl. Y1 maint./support. IBM, the IBM logo, ibm.com, DB2, Power Systems, Smarter Planet and the planet icon are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.shtml. © International Business Machines Corporation 2011.

BETWEEN THE LINES
By John Klossner

HEALTHCARE

IBM's Watson to Diagnose Patients

WATSON, IBM's game-show-playing supercomputer, will soon try its hand at helping physicians diagnose and treat their patients.

IBM announced earlier this year that healthcare would be the first commercial application for the computer, which defeated two human champions on the popular television game show "Jeopardy!" in February.

IBM and WellPoint — Blue Cross Blue Shield's largest health plan — this month agreed to jointly create applications that can be used by doctors and other medical personnel.

The software will use the concept of "evidence-based medicine," which centers around best practices in treating patients. One simple example of evidence-based medicine would be placing someone who's had a heart attack on an aspirin regimen.

Watson consists of 90 IBM Power 750 Express servers powered by 8-core processors — four in each machine — for a total of 32 processors per machine. The servers are virtualized with a kernel-based virtual machine scheme, resulting in a server cluster with a total processing capacity of 80 teraflops. (A teraflop is one trillion operations per second.)

That horsepower can help medical professionals cull through a lot of information quickly. Watson can search 200 million pages of data and provide responses in just seconds.

"Imagine having the ability to take in all the information around a patient's medical care — symptoms, findings, patient interviews and diagnostic studies," said Dr. Sam Nussbaum, WellPoint's chief medical officer, in a statement. "Then, imagine using Watson analytic capabilities to consider all of the prior cases, the state-of-the-art clinical knowledge in the medical literature and clinical best practices to help a physician advance a diagnosis and advance a course of treatment."

WellPoint expects to begin using Watson in clinical pilots early next year.

– Lucas Mearian

Micro Burst

Internet Explorer's market share will fall below

50%

by June 2012 if current browser usage trends continue.

MOBILE & WIRELESS

Android: King of the Smartphones

Android won the smartphone OS war this year in definitive fashion, capturing 39% of the market, according to IDC. The research firm predicted that Android-based smartphones will dominate the market in 2015 with a nearly 44% share, while Apple and Research In Motion will battle for second place.

Android easily passed last year's leader, Nokia's Symbian OS, whose market share fell from 36% in 2010 to a projected 21%. Android's share jumped more than 15 percentage points, from 23% in 2010, IDC said.

RIM's BlackBerry operating system will see its market share slip from 16% last year to 14% in 2011, while the share of Apple's iOS will increase from 16% last year to 18% in 2011, IDC predicted. Meanwhile, Windows Phone will wind up with less than a 4% share, since it will soon replace Symbian for Nokia.

Regardless of winners and losers, there's been substantial growth in smartphone use worldwide. IDC said almost 305 million devices shipped in 2010 and projected that this year's shipments will hit 472 million – a growth rate of 55%.

Future smartphone growth will be driven largely by the number of applications available, said IDC analyst Ramon Llamas.

– MATT HAMBLEN

MOTOROLA

NO, I'M NOT TURNING IN MY PHONE.

THE TURNCOAT

You can't control your employees. You can control their phones. That's why Motorola Android™ Smartphones are armed with remote wipe, passcode protection, data encryption and the most secure connectivity standards. Contact Motorola today for mobility solutions that keep your company safe and IT in control.

LIFE. POWERED.

MOTOROLA.COM/SECURITY (800) 617-2403

How 9/11 Changed Data Centers

The 2001 terrorist attacks quickly shed light on the need for stronger physical and technical security. By Patrick Thibodeau and Grant Gross

DATA CENTERS have always been secure, tightly controlled facilities, but the terrorist attacks of Sept. 11, 2001, brought about changes that pushed both physical and IT security to significantly higher levels.

The 9/11 attacks, which came on the heels of the Internet boom in the late 1990s, were a wake-up call for many CIOs who hadn't contemplated the possibility that their company's IT operations could be destroyed in an instant, without warning.

Losses of technology and intellectual property on "such a large scale" were previously considered unlikely, said Keith Payne, IT security officer at Javitch, Block & Rathbone. "Many companies maintained their systems under the idea that they could reconstruct [them] with only minor interruption to the enterprise," he said.

Today, data centers are far more likely to have multiple points of security, including physical barriers such as crash-resistant fences and high-tech defenses like biometric identification systems, experts say.

It's also less likely today that backup and recovery data centers will be built near primary IT operations, and it's more likely that new facilities will be built outside of urban areas.

"Data center designers have always been mindful of security concerns," said Tad Davies, an executive vice president at Bick Group, an IT services provider. "What 9/11 caused us to do is to think [more broadly] and on a massive scale."

Kris Domich, principal data center consultant at IT services provider Dimension Data, said that in the 1990s, secondary data centers were often just a relatively quick drive away from primary facilities. Now, minimum distances often range from 100 to 1,000 miles or more.

The attacks convinced IT managers at many financial services firms that the urban locations of their data centers could not be easily secured, said Ken Brill, founder of the Uptime Institute.

"The best defense remains site selection," Brill said, adding that the ideal data center location would have "acres of surrounding land."

"The military uses 159 [feet] as the minimum separation between the outside walls of critical buildings and areas of public access," he said. Most private-sector companies don't come close to meeting that criterion, Brill said, though he noted that the recently opened 400,000-square-foot NYSE Euronext data center in New Jersey is located on a 28-acre site with a number of defenses, including a moat.

Domich said commercial data center providers, which have long put significant focus on security, have become a more viable option for large and small companies.

One such provider is Vantage Data Centers in Santa Clara, Calif., which leases data center space in a complex located on an 18-acre campus that's surrounded by an eight-foot fence capable of stopping a car, said CEO Jim Trout.

Beginning with the entry gate, visitors are checked at as many as seven points in the 310,000-square-foot facility. The complex is patrolled by guards, and features an array of high-tech defenses, including fingerprint ID systems, mantraps and cameras. It also has redundant electrical capacity, so if one system gets knocked out, a backup takes its place, said Trout. "There is no question," he said, that 9/11 affected data center security plans. ◆

Gross *is a reporter for the IDG News Service.*

Data center designers have always been mindful of security concerns. What 9/11 caused us to do is think [more broadly] and on a massive scale.

EXECUTIVE VICE PRESIDENT, BICK GROUP

FOTOLIA / ANDREA DANTI

©2011 CenturyLink Inc. All rights reserved.

Delivering a stronger network. And more personal service.

Our network has expanded, and so has our ability to serve you. When you combine our personal, consultative approach with our premiere technology platform – including colocation, managed hosting and nationwide fiber-optic network with global reach – you will find you are free to drive productivity and bottom-line growth. **Your link to what's next.**

Data | Voice | Managed Services

Qwest BUSINESS

CenturyLink Business

See the benefits of partnering with us at centurylink-business.com

Qwest is now CenturyLink.

Healthcare CIOs Tell Job Seekers to Keep Skills Sharp

The medical industry seeks thousands of IT workers, but its need for unique skills makes hiring difficult. By Lucas Mearian

AN IT JOB APPLICANT with a history of constantly beefing up his technology and management skills is more impressive to Timothy Stettheimer than a positive referral or a strong face-to-face interview.

"How do you know you're hiring a good person? You can get a referral. So what? Someone can interview well. So what? But when [an applicant] can say, 'I've hit these [IT education] targets,' that shows a commitment to advancement," said Stettheimer, who is CIO at St. Vincent's Health System in Birmingham, Ala.

When [an applicant] can say, **'I've hit these [IT education] targets,'** that shows a commitment to advancement.

(LEFT): CIO, ST. VINCENT'S HEALTH SYSTEM

Lt. Col. Eric McClung, CIO for the U.S. Army's Pacific Regional Medical Command (PRMC), said the ability to demonstrate continual upgrades in IT and management skills is doubly important for people interested in healthcare-related IT jobs in the military, where leadership changes every two to three years.

The PRMC is one of five Army regional medical commands worldwide that oversee day-to-day operations of treatment facilities in their regions.

The difficulty in finding candidates who keep up with changes in healthcare often prompts McClung to look for general healthcare workers who'd like to move into IT. It's often easier, he said, to teach technical skills to someone with a healthcare background than it is to teach an IT professional about healthcare.

"Just get me an interesting, willing person with a healthcare background, and my organization will overlay the IT knowledge required," said McClung, who's also CIO at Tripler Army Medical Center in Hawaii.

Job hunters should take note of qualifications that Stettheimer, McClung and other healthcare IT executives are seeking, because that industry leads the way in IT job openings. The U.S. Department of Labor's Bureau of Labor Statistics projects that IT jobs in healthcare will grow by about 20% per year through 2018. There are currently 176,090 IT jobs in the industry, according to the BLS.

According to SimplyHired.com, the number of healthcare IT positions has increased by 67% since November 2009. The online job-search engine lists 7,200 open healthcare IT positions out of 4.9 million jobs on its website.

"Healthcare is definitely one of the most significant areas of growth, and it requires the most skilled people," said Keith Fraidenburg, vice president of education and communications at the College of Healthcare Information Management Executives (CHIME), a professional development association for healthcare IT executives. "It's the ultimate matrix management. Each part of the organization is fully dependent on other parts."

Stettheimer refers to CHIME as the "scalpel" of healthcare IT training organizations because it focuses on specific healthcare IT skill sets.

According to Fraidenburg, the most coveted CHIME certifications are those for project management of clinical systems and electronic health records deployment and administration.

The organization also offers a highly complex healthcare CIO certification program that covers both business and technical subjects, he said.

"Healthcare is the most information-intense and complex industry that I know of," Fraidenburg said. "I've worked in manufacturing ... but in terms of complexity and the impact of information ... I don't know anything that compares with healthcare." ◆

UNIVERSITY OF NORTH TEXAS

Machine data goes in. Business insight comes out.

Splunk software takes your raw machine data and makes sense of it. Business sense. IT sense. Common sense.

splunk> listen to your data

www.splunk.com/goto/listentoyourdata

THE Grill

Daniel Brusilovsky

The Teens in Tech founder helps young entrepreneurs like himself get started

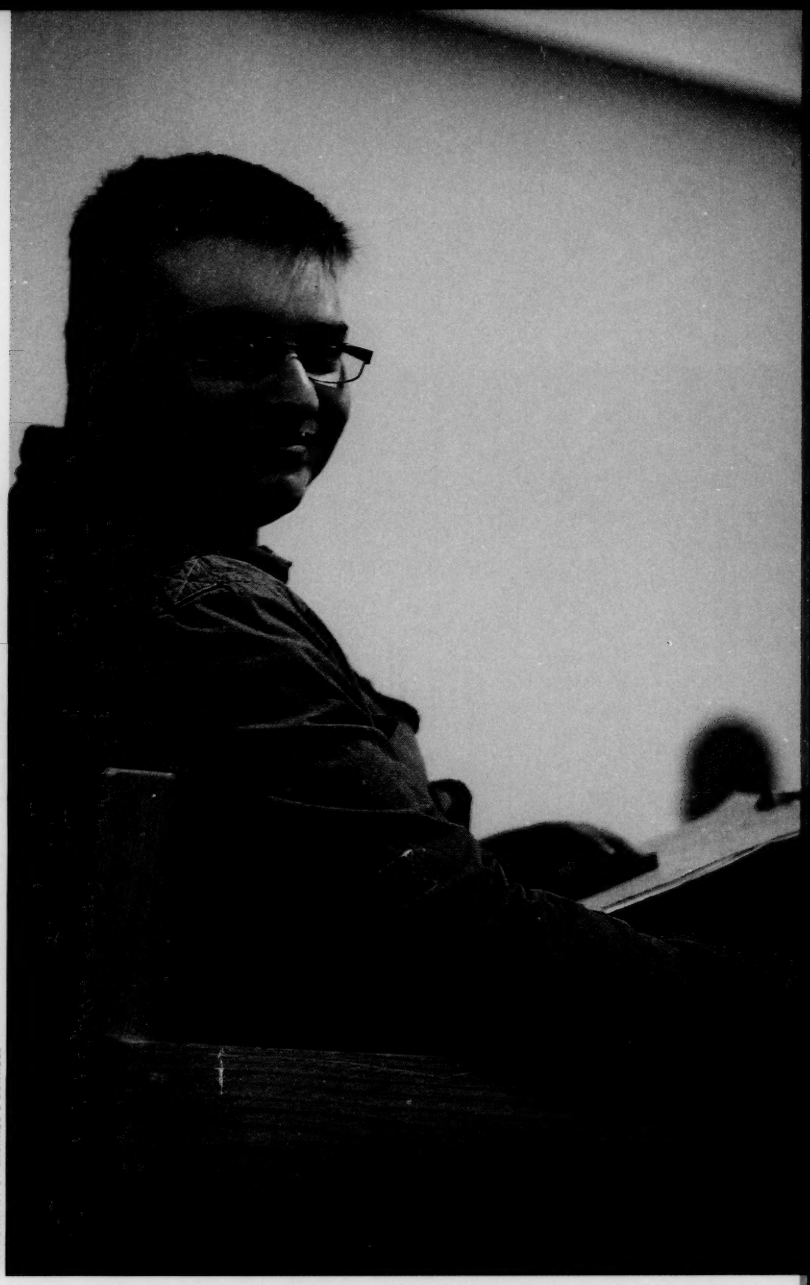
Do you have a role model? Jack Dorsey, a co-founder of Twitter and founder and CEO of Square. I've been extremely fascinated by the work he does and the way he does it.

What's your favorite technology? The iPhone. It just does everything for me.

What do you do in your spare time? I always make sure to have spare time. I love hanging out with my friends and going to the movies. I love to play golf.

What's the best piece of advice you ever received? Don't let anyone ever tell you no.

Do you have a favorite blog? I always read Techmeme.

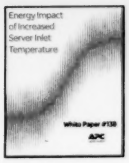


PHOTOGRAPHY BY MICHAEL O'DONNELL

DANIEL BRUSILOVSKY *has an impressive résumé: CEO, entrepreneur, speaker and strategist. Those are strong credentials for anyone, but they're particularly remarkable for someone as young as Brusilovsky. The 18-year-old California college student has spent several years building businesses and his career, and he's now passing on his experience and insight through Teens in Tech Labs, a Mountain View, Calif., company he founded in 2008 that's dedicated to providing tools and resources to young entrepreneurs. Supported by funding from corporate sponsors, it has four employees and two interns.*

How did you get into technology? My parents emigrated from the Ukraine almost 17 years ago. They have computer science degrees, and they work at technology companies. So growing up, I've always been surrounded by technology. After school, my parents would pick me up and take me to their offices. I'd be there for hours, and I'd

Continued on page 12



Download FREE White Paper #138: "Energy Impact of Increased Server Inlet Temperature."

www.apc.com/promo
888-289-APCC x6303
FAX: 401-788-2797

Key Code
f889v

Name: _____ Title: _____

Company: _____

Address: _____ Address 2: _____

City/Town: _____ State: _____ Zip Code: _____ Country: _____

Phone: _____ Fax: _____

email: _____

☐ Yes! Send me more information via email and sign me up for the Uptime™ email newsletter. Key Code: f889v

What type of availability solution do you need? ☐ UPS: 0–16 kVA (Single-phase) ☐ UPS: 10–80 kVA (3-phase AC) ☐ UPS: 80+ kVA (3-phase AC) ☐ DC Power ☐ Networking Enclosures and Racks ☐ Air Conditioning ☐ Monitoring and Management ☐ Cables/Wires ☐ Line Conditioning ☐ Mobile Protection ☐ Surge Protection ☐ UPS Upgrade ☐ Don't Know

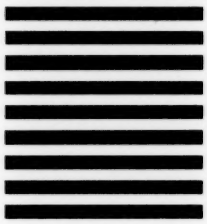
Purchase time frame? ☐ <1 Month ☐ 1–3 Months ☐ 3–12 Months ☐ >1 Year ☐ Don't Know

You are (check one) ☐ Home/Home Office ☐ Business (<1,000 employees) ☐ Large Corp. (>1,000 employees) ☐ Gov't, Education, Public Org. ☐ APC Sellers and Partners

APC by Schneider Electric

©2011 Schneider Electric. All Rights Reserved. Schneider Electric, APC, and Uptime are trademarks owned by Schneider Electric Industries SAS or its affiliated companies. email: esupport@apc.com
• 132 Fairgrounds Road, West Kingston, RI 02892 USA • 998-2362

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



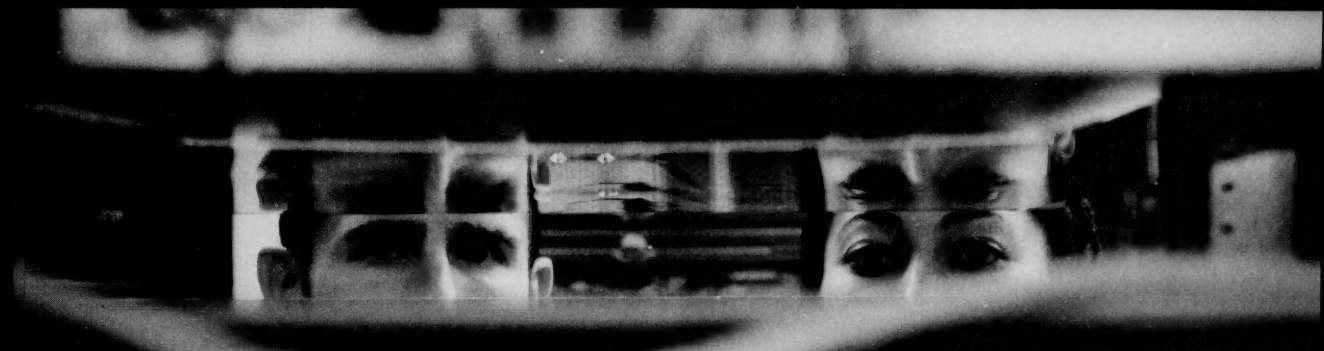
BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT # 36 WEST KINGSTON RI

POSTAGE WILL BE PAID BY ADDRESSEE

APC

ATTENTION CRC: **f889v**
132 FAIRGROUNDS RD
PO BOX 278
WEST KINGSTON RI 02892-9920



Introducing Server Room in a Box

APC integrated cooling future-proofs your IT room without breaking the bank.

Is your server room a barrier to adopting new technologies?

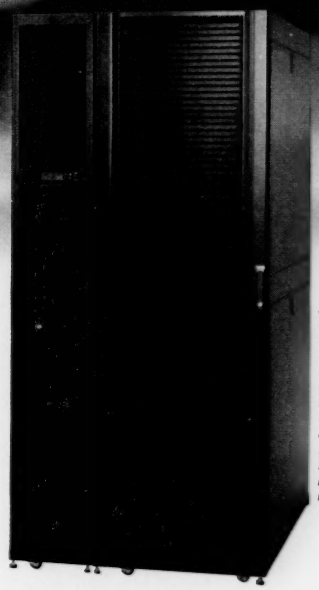
Consolidation, virtualization, network convergence, blade servers — these new technologies improve efficiency, cut costs, and allow you to "do more with less." But they also bring high-density power, cooling, and management challenges that server rooms were never designed to handle. You're relying on guesswork, depending on building air conditioning, or improvising remedies. So, how can you increase the level of reliability and control in your server room without spending a fortune?

Introducing the APC by Schneider Electric total server room solution.

Now you can get power, cooling, monitoring, and management components that easily deploy together as a complete, integrated solution. Everything has been pre-engineered to work together and integrate seamlessly with your existing equipment. Just slide this proven, plug-and-play solution into most existing spaces — there's no need for confusing cooling configurations or expensive mechanical re-engineering. The modular, "pay as you grow" design lets you be 100 percent confident that your server room will keep pace with ever-changing demands.

Future-proof your server room easily, cost-effectively.

APC by Schneider Electric™ takes the hassle out of configuring server rooms. Self-contained InRow™ cooling units, high-density NetShelter™ enclosures, and the APC rack air containment system combine to create a proper IT ecosystem in almost any surrounding. Rack-level monitoring sensors, intelligent controls built into the cooling unit, and integrated management software provide complete remote control and unprecedented visibility into the entire system. Simply add power protection (like undisputed best-in-class Smart-UPS™ or Symmetra™ units) and you have a total solution for today, tomorrow, and beyond.



APC rack-based cooling draws in hot air from the rear, at its source, and then sends conditioned air out the front, ready to be used by adjoining racks.

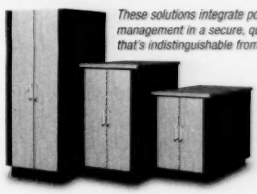
If you have dedicated IT space . . .

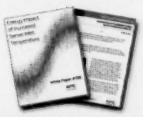
Get prevalidated high-density cooling as a single offering.

*APC InRow SC System combines an InRow SC precision cooling unit (up to 7kW capacity), NetShelter SX rack enclosure, and rack air containment system at a specially discounted price, for a limited time.**

If you don't . . .

Introducing the NetShelter Office CX: portable server cabinets, with extreme noise reduction, designed for office environments.

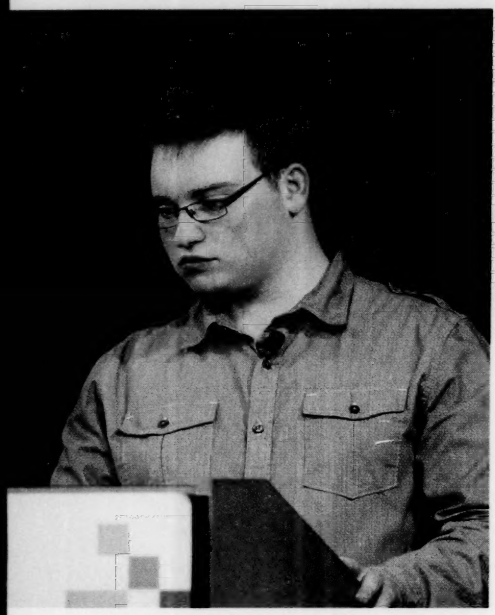


These solutions integrate power, cooling, and management in a secure, quiet, cooled enclosure that's indistinguishable from other office furniture.

Learn how to reduce cooling expenses with our FREE Cooling Efficiency Kit.

Visit www.apc.com/promo Key Code f889v • Call 888-289-APCC x6303 • Fax 401-788-2797

APC™ by Schneider Electric

©2011 Schneider Electric. All Rights Reserved. Schneider Electric, APC, InRow, NetShelter, Smart-UPS, and Symmetra are trademarks owned by Schneider Electric Industries SAS or its affiliated companies. email: esupport@apc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA • 998-2029 *Full details are available online.



> **When I was first starting out, people didn't take me seriously.** I'd think, 'I'm not trying to be cute – I'm trying to start something.'

Continued from page 10

work on homework and I'd have my laptop. But on the way home, I'd ask my mom or dad, "What's a server? What's a database?" and the more I asked, the more I got intrigued by everything going on.

You started working in technology when you were 14. How did you land your first tech job? I'd go to my dad's office every day, and I'd do my homework and go online and read the news. One day, the CFO came up to me and said, "You're here every day — why don't we give you something to do?" So I started working at this company, Remend, where I did everything from hardware stuff to fixing computers to setting up new computers. The whole point of the job was that they wanted to teach me as much as possible about computers.

Tell me about Teens in Tech. I've started three companies and sold one of them, and there were always the same struggles: I have an idea, but I don't know what to do, who to talk to. Entrepreneurs come to us with ideas, so they don't need our help there, but they need help jump-starting them. So we have [an eight-week training program called Incubator], a blog, a conference — all around trying to help as many entrepreneurs as possible.

In this world where young people grow up accessing information with ease, why do they need help from Teens in Tech? When I founded my first company, which was a media group, I worked with a lot of adults. Young people like to talk to young people. And that's what's unique about us. At our conference, half of our speakers are under the age of 21 and the other half started their companies when they were under 21. I think that's why people come to us: We have this community of young entrepreneurs who have the same understanding of what's going on.

Why is it so hard for young people to communicate with older people? Do adults just dismiss them? I think that's part of it. When I was first starting out, people didn't take me seriously, and that's something that really upset me. I was going into meetings with [venture capitalists] and they'd just consider me cute, and I'd think, "I'm not trying to be cute — I'm trying to start something."

Like many other executives, you've made some mistakes – specifically, a public one over allegations that you offered coverage in exchange for compensation when you worked at the Web publication TechCrunch. What did that experience teach you? One of the biggest lessons I took from it was that 20 years ago, there was no Internet, so nothing we'd say would come back to haunt us. But today, when everyone is connected, everything will be heard. That's one thing that I don't think a lot of people realize — that everyone will find out one way or another. Working at TechCrunch was a fantastic experience. There were a lot of lessons I learned, and I owned up to [my mistake]. I think that's the only thing we can do: learn from our mistakes and move on.

There's a general concern that young people are great users of technology but that not enough are becoming technologists. Why do you think that's so? What I feel may be the reason is that [young people] don't understand how it all works, and I think it's an education problem.

Do you think the amount of time your generation spends online or with technology has any negative effects? I definitely think so. A lot of people spend too much time online and don't focus on their priorities, which, for most, are school and things like that. I believe it's up to the parents to really educate, to take responsibility and say, "You need to step away from the computer and focus on your homework." That's what my parents did.

Do you think companies are missing out on any IT trends that could help them? What's great is that a lot of big companies are getting on the social bandwagon, but it still fascinates me that they don't have a mobile-optimized site. Not even an iPhone app. If I go to a website, I expect it to have a site that loads automatically onto my phone, things like that. There are still a lot of advancements that need to be made.

What's your technology vision of the future? To be perfectly honest, I don't know. The way I look at it is, every day there's new technology being developed. It's one of those things in this industry — you never know what's going to happen next.

– *Interview by* Computerworld *contributing writer* **Mary K. Pratt** *(marykpratt@verizon.net)*

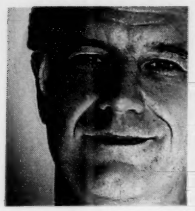
intel inside
CORE i7 vPro

concierge included

THE HP ELITE SERIES Premium service and support, only available for the HP Elite Series. With fast call response and resolution, it goes above and beyond anything you've ever experienced. More secure, manageable and responsive with the 2nd gen Intel® Core™ i7 vPro™ processor, it all adds up to make HP Elite "elite."
hp.com/Elite

Everybody On hp

© 2011 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. Intel, the Intel logo, Intel Core, Intel vPro, Core Inside, and vPro Inside are trademarks of Intel Corporation in the U.S. and/or other countries.



OPINION

BART PERKINS

Brainpower for Free

'Games with a purpose' have a place in corporations looking for answers to complex issues.

MY SENSE IS THAT, IN 2012, IT will once again be asked to do more with less. Given the budgetary constraints, most IT organizations would love to make a big impact without spending a lot of money. Sound too good to be true? Not necessarily.

Universities, nongovernmental organizations and charities must frequently address difficult problems with limited resources. For answers, many have turned to a new genre of video games known as "games that change the future" or "games with a purpose." Players immerse themselves in complex issues — energy shortages, revolutions, famines and pandemics, to name a few — and work out the best ways to address them. But such games also have a place in corporations.

According to Asi Burak, co-president of the nonprofit Games for Change, many of the most successful games do one or more of the following:

Crowdsource creative solutions. In 2010, a World Bank-sponsored game called Evoke challenged players to develop solutions to intractable problems such as water shortages, poverty and disaster relief. The best ideas were discussed at the Evoke Summit. Top players received public recognition, mentoring by social innovators and seed funding for their ideas.

A similar game might address "big data" issues, challenging players to discover innovative approaches to managing, searching, processing and visualizing the data. Players could also suggest new uses for the data.

Expand game designers' boundaries. FoldIt players solve 3D puzzles. Scientists analyze gamers' approaches to pattern matching to improve computer-generated algorithms for predicting how protein "folds" into 3D structures.

A similar game could solicit ideas for implementing green IT and allow players to review proposed designs for possible improvements.

Raise players' awareness. Game designers attempt to change players' perspectives on entrenched issues by placing gamers in important roles. PeaceMaker players assume the role of Israel's prime minister or Palestine's president. Players make security, construction and political decisions, and address unexpected consequences. Each leader must maintain the approval of the populace, the U.N., the Arab world and the U.S.

In the Project Management Game, players develop project plans, put together staffs and set tasks, schedules and budgets. The game then simulates project execution. Players' virtual staffs must complete projects without running out of time, money or other resources, while dealing with "chance events" that alter the project's viability.

Assuage a current situation. Players of Zynga games (FarmVille, Mafia Wars, etc.) have donated over $10 million to disaster relief by selling limited-edition virtual goods. FreeRice is a multiple-choice quiz covering subjects such as basic math, literature and chemical symbols. For every correct answer, 10 grains of rice are donated to the U.N.'s World Food Programme.

Organizations trying to change corporate perceptions of IT could establish a similar game demonstrating knowledge of IT products, services and processes. Departments or individuals could compete for points, virtual prizes or that well-established IT reward — a Friday pizza party.

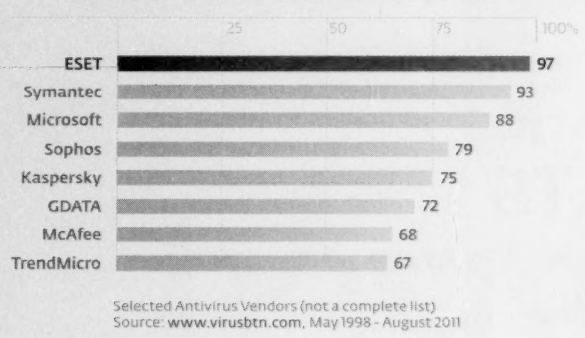
Business units have begun to adopt games, primarily for training and customer engagement. But that's not enough. Determine how your department can harness the power of gaming to generate potential solutions to IT's most complex challenges. Capitalize on brainpower available from employees, business partners and departments across the enterprise. The price is right! ◆

Bart Perkins is managing partner at Louisville, Ky.-based Leverage Partners, which helps organizations invest well in IT. Contact him at BartPerkins@LeveragePartners.com.

World's No. 1

Antivirus and Internet Security

ESET leads the industry in the consecutive number of "VB100" awards from Virus Bulletin testing organization.



Selected Antivirus Vendors (not a complete list)
Source: www.virusbtn.com, May 1998 - August 2011

Limited time offer: 1 year FREE

Buy two years, get the third free

Offer valid on 25 seats or more of ESET NOD32 Antivirus Business Edition and ESET Smart Security Business Edition

10/1-12/31/11. For terms, visit www.eset.com/q4promo

eset

www.eset.com

2011 Information Security's READERS' CHOICE AWARDS gold winner

© 2011 ESET, LLC. All rights reserved. Trademarks used herein are trademarks or registered trademarks of ESET, LLC. All other names and brands are registered trademarks of their respective companies.

IT GETS Energized

As tech budgets edge up in 2012, IT leaders look to shift spending to new development while keeping an eagle eye on the bottom line. **BY MARY BRANDEL**

THIS PAST SUMMER, many members of the IT staff at Daymon Worldwide took a well-deserved break. For two years, there had been no time off, as IT was fully engaged with a master data management initiative, with the goal of creating a definitive source of operational data that provides all employees with accurate information in real time.

The breather was much needed, since 2012 promises to introduce several new projects that will similarly be aimed at honing Daymon's competitive edge.

According to Abhi Beniwal, senior director of IT at the Stamford, Conn.-based private brand and retail marketer, IT spending will increase next year, but there's a catch: "On the one hand, we're tasked to reduce overall costs, but we're also expected to invest in new things that will give the company a competitive advantage."

Meeting this two-pronged goal will

GETTY IMAGES / COLIN ANDERSON

Exception To the Rule

ONE COMPANY that is bucking the flat-to-slightly-increased budget trend is The Sedona Group, a workforce management solutions provider in Moline, Ill. David Buzzell, CIO at Sedona, expects a budget increase of 10% to 20% in 2012, which will go toward adding staff, upgrading systems and launching new projects.

Major technology investments at Sedona next year will include completion of a Windows 7 and Office 2010 upgrade, server upgrades, consolidation of two phone systems, a deeper push into mobile applications and increased functionality in Sedona's business intelligence and reporting systems. The latter reflects *Computerworld*'s Forecast survey finding that BI is one of the top technologies identified as being instrumental to long-term sustainability. Buzzell also agrees with survey respondents about the competitive importance of Web applications. "We will migrate most of our offices to a new Web-based application to allow sharing of data and resources between locations," he says. "This has reduced the need for internal staff at many of our offices, while providing better service and functionality."

When choosing which projects to pursue next year, top priority will be given to those that deliver direct value and can be implemented quickest, Buzzell says. But streamlining operations and eliminating multiple platforms will also be emphasized, to reduce costs. "It's fewer items to support and maintain workflows on," he says. "This streamlining of processes has a direct ROI."

– MARY BRANDEL

involve cutting operational costs while shifting spending to new development, Beniwal says. The goal is to move from the current 70-30 ratio of ongoing maintenance versus new services and capabilities to a 60-40 ratio. Achieving this, he says, will involve taking real steps toward private and public cloud initiatives to reduce costs in some areas. It will also require a serious look at eliminating little-used, redundant and costly systems.

Double-Edged Sword

Across industries, IT groups are facing a similarly double-edged sword: Despite the uncertain economic recovery, businesses are cautiously increasing IT investments for next year, and they want to do more than just keep the lights on — they want to see business returns, such as revenue growth and competitive differentiation.

"The good news is, they want to spend," says Alan Guibord, founder of The Advisory Council, an IT consulting firm in Salem, N.H. "The bad news is, they're being very demanding about their expectations of what will come out of IT for that investment."

For many IT organizations — which have spent the past couple of years hacking away at operating costs as a result of the recession — that will mean not only carefully choosing projects that promise high returns, but also transforming their operating models and sourcing strategies to further reduce infrastructure costs and reinvest those savings in new endeavors.

In *Computerworld*'s 2012 Forecast survey, for instance, more than one-third of the 353 IT executives polled said IT budgets would increase next year, just slightly more than last year (see charts on page 20). But while budgets are inching upward, IT remains laser-focused on the bottom line, continuing to seek out new ways to economize. Indeed, when respondents were asked to name the most leading-edge projects they would undertake next year, the top two responses were virtualization and the cloud, both of which promise to radically remove costs from operating models. And the No. 1 management challenge for 2012, respondents said, will be budget constraints and economic pressures.

"The new normal for IT organizations is they can no longer run like a black box," says Craig Symons, an analyst at Forrester Research. "There's a difference between budget cutting and being lean and efficient. They need to be lean, and either you do that by taking advantage of newer technologies like virtualization and private clouds or you look at some of these new, emerging sourcing alternatives, like software as a service [SaaS] or completely outsourcing business processes themselves."

Forrester's most recent budget survey supports the notion that IT managers will be cutting costs with one hand while supporting business innovation with the other. Survey respondents cited efficiency as the No. 1 priority, but second in line was increasing IT resources and capacity to drive business innovation, Symons says. As at Daymon Worldwide, IT organizations won't be asked to reduce the budget, but rather to shift spending toward new development, possibly even moving to a 50-50 ratio of maintenance versus new development, he says.

"The demand is there, but the overall budget can't grow to meet it. So to help fund demand, they need to shift the money," Symons says. "If people believe IT is a differentiator, they can't keep spending 70% to 80% of the budget on keeping the lights on."

Such a transition won't be easy, cautions Shvetank Shah, executive director of the IT practice at the Corporate Executive Board Co., a research and advisory firm. Historically, the percentage of the IT budget spent on maintenance has been stubbornly hard to shift, he says. "For every dollar spent on new projects, there's an annual 15 to 18 cents of maintenance spend that accompanies it, so many companies are unable to shake the tyranny of that math," he says.

TOP WORRIES

Top three management challenges in the next 12 months:

1. Budget constraints/ economic pressures
2. Managing projects
3. Managing expectations/ business alignment

SOURCE: COMPUTERWORLD'S EXCLUSIVE FORECAST 2012 SURVEY OF ONE-THIRD BASE: 353 IT EXECUTIVES

Preliminary results from a membership survey by the Corporate Executive Board corroborate the finding that budgets will grow only slightly next year, partly because of the anemic recovery and partly as a balance to the catch-up spending this year. In 2012, growth in operating expenditures is forecast at 2.9% among the 178 survey respondents, all large firms with more than $1 billion in revenue. This is in stark contrast to an increase of 10% this year, Shah says. "There was a pent-up demand for IT, and now spending is returning to modest levels," he says.

The 'I' in IT

Joe Eng, CIO at JetBlue Airways, agrees that the tumultuous economic situation will cause companies to invest cautiously in IT. Companies such as JetBlue "will be conservative, building up cash balances and riding out the lack of certainty in the world markets," he says. "In the last couple of years, [JetBlue] made significant investments in technology, so we're now harvesting the benefits of those investments."

And when companies do spend on technology next year, those expenditures will be geared around projects that promise to grow revenues, increase productivity and produce short-term return on investment, Eng says. Shah agrees that the dollars will go toward information-driven projects, or what he calls the "I" in IT. This includes customer-facing systems such as social media, marketing and Web applications; business intelligence (BI) and analytics; and collaboration and knowledge-sharing capabilities. As a group, these technologies will represent almost 36% of the project budget, in contrast with process automation systems, such as ERP and CRM, which will still represent about 33% of the budget.

In the airline business, for instance, a major focus will be around the digital experience offered to customers, including continuing to extend brands to social media channels such as Facebook and Twitter. "[JetBlue wants] to harness the relationship with the customer on an ongoing basis to increase customer loyalty and improve the customer experience," Eng says.

Guibord sees companies combining social media and predictive analytics to provide customers with more personalized experiences. "The Internet has changed everything — we want it now, and we want it our way, and companies need to think about that in every service they create and infrastructure they build," he says. This is often referred to as the "Sunday night/Monday morning syndrome," where people have grown to expect the same simplicity, functionality and personalization from all of their digital encounters as they get from using Google, Amazon and other popular websites. "Customers want personalized, specialized types of experiences, and companies are willing to spend money on that because it directly correlates to increased revenue and market share," Guibord adds.

These investments will extend to mobile channels as well. In the *Computerworld* Forecast survey, mobile projects were among the top three leading-edge projects that IT organizations are

The ability to tackle what's next

Like cloud. We invite you to enter this year's Cloud Awards, which PwC is sponsoring at The UP 2011 Cloud Computing Conference.

Submit your cloud initiatives or provider solutions by September 30, 2011. A panel of leading cloud computing industry specialists will select the most promising companies in these categories:

- Exceptional Enterprise Cloud User
- Fastest-Growing Cloud Computing Company
- Overall Most Innovative Cloud Computing Provider
- Most Promising Start-Up Cloud Computing Provider

Companies selected will be recognized at the conference (December 5–9). To learn more about the conference and/or to apply for the Cloud Awards, please visit www.pwc.com/us/cloud

Use this URL -- http://up11.eventbrite.com/?discount=CLOUD10 -- prior to 10/31/2011 to receive a 10% discount on your conference registration fee.

pwc

© 2011 PwC All rights reserved. "PwC" refers to PricewaterhouseCoopers LLP (a Delaware limited liability partnership), which is a member firm of PricewaterhouseCoopers International Limited, each member firm of which is a separate legal entity. This document is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.

working on. "Customers all have smartphones and are always online, so there will be investments in that area," Eng says. And at Daymon, Beniwal says the company is increasingly looking to mobile devices, both to reduce costs and to increase its frontline insights into customer preferences. For example, one of the services it provides to retailers is handing out free samples in stores, such as food items at major retailers. It plans to use mobile devices, most likely tablets, for some of the 15,000 employees who perform this service in seven countries, for both time tracking and recording of customer feedback on the samples. "In the past, we'd have to buy specialized devices, which were cost-prohibitive," Beniwal says. "Now, we can pay $300 to $400 for an Android or iPad. All these innovative devices are enabling people to do what they hadn't thought of before."

A BI Focus

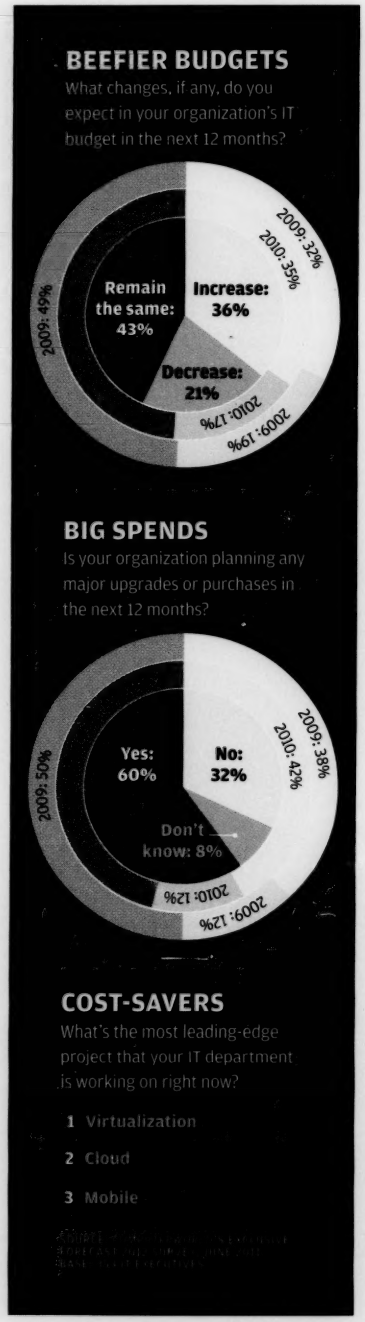
Jay Leader, CIO at iRobot, similarly foresees a relatively tight budget for next year, especially compared with last year, when the company had a more aggressive outlook on the economy. In the past year, IT worked on upgrading and stabilizing the company's core business platforms, including moving to Oracle Release 12, expanding its ERP capability and working on product life-cycle management. In the past couple of years, it also fully virtualized its data center.

Now, Leader says, technology investments will be concentrated on BI and collaboration — two areas that support iRobot's status as a growth company. "The nature of the work we do is: when brilliant people come together, magic happens. So we're working to put them together on a collaboration platform," he says. The company is working on a preliminary Microsoft SharePoint implementation, which it will expand in the coming year.

The BI focus will be to provide people with data they need from various applications, such as product quality, ERP and CRM systems, to develop a comprehensive view for company executives. "We're a growth company, so scalability and pace of growth is very important," says Leader. "We focus on what allows us to be scalable and leverage our assets, be they human or material, most effectively."

In Forrester's survey, increased use of BI and decision-support tools was the No. 2 technology priority among respondents, second only to consolidating the IT infrastructure. "BI has always been there, but it's growing in importance," Symons says. "The volume of data that organizations are capturing has increased significantly with more commerce going to the Web and social media technologies, and there's a need to take that data and translate it into information that can be used for better decision-making."

Beniwal says Daymon also plans to increase its BI investment, in the form of advanced analytics, which will build on its master data management initiative, especially in the areas of sales forecasting and supply-chain optimization and pricing.



A New Menu

For some companies, making these investments will require further reducing hardware and infrastructure costs, and to do that, some will likely use 2012 to consider new sourcing options. For instance, Daymon has already centralized some of its business processes and moved them to a new location in Kansas, using internal staff. It is also looking into hosted services, or the cloud, for non-data-intensive functions, such as project management and collaboration, as well as for systems that run out of the box, such as SQL Server. "There is some data we can't take to the public cloud, such as information from our partners, so we'll start with private and slowly see which we'll take to the public cloud," Beniwal says.

"Cloud, SaaS and alternative sourcing models will become more mainstream in the years to come," Symons agrees. Over time, he sees CIOs increasingly becoming solution brokers or service orchestrators. "You've got a wide menu of alternative sourcing options today," he says. "CIOs need to become sourcing-agnostic — for any business need, they should ask, 'What's the best way to fill that need?' It's only the really large organizations that have the scale where it might still make sense to host your own infrastructure."

While SaaS will remain a small percentage of overall IT expenditures next year, it will grow as a percentage of total IT operating expenditures, according to the Corporate Executive Board survey. SaaS will increase from 2% of the budget in 2011 to 2.6% in 2012. Meanwhile, infrastructure as a service will grow from 2.7% to 3.1%, and platform as a service will grow from 0.6% to 0.8%.

Still, Leader and some other CIOs say they will mainly continue with their traditional IT infrastructures with only small forays into the cloud. "There's nothing I've seen so far that tells me the cloud is more cost-effective," he says. "I'm cloud-weary and grizzled enough to see the hype cycle."

As expectations for IT delivery grow, challenges loom for IT organizations in 2012. "There is an enormous diversity of

Rather than cutting costs in IT, [businesses] are investing in IT so they can reduce costs in other places, improve the business and create competitive advantage.

ALAN GUIBORD, FOUNDER, THE ADVISORY COUNCIL

projects," Shah says. "Three years ago, there were maybe three or four flavors in the IT budget, but this year, it's more like Ben & Jerry's, with lots of flavors. And with that tremendous diversity comes a more complex portfolio, so it's driving IT folks to distraction as they struggle to keep up with the vaster scope."

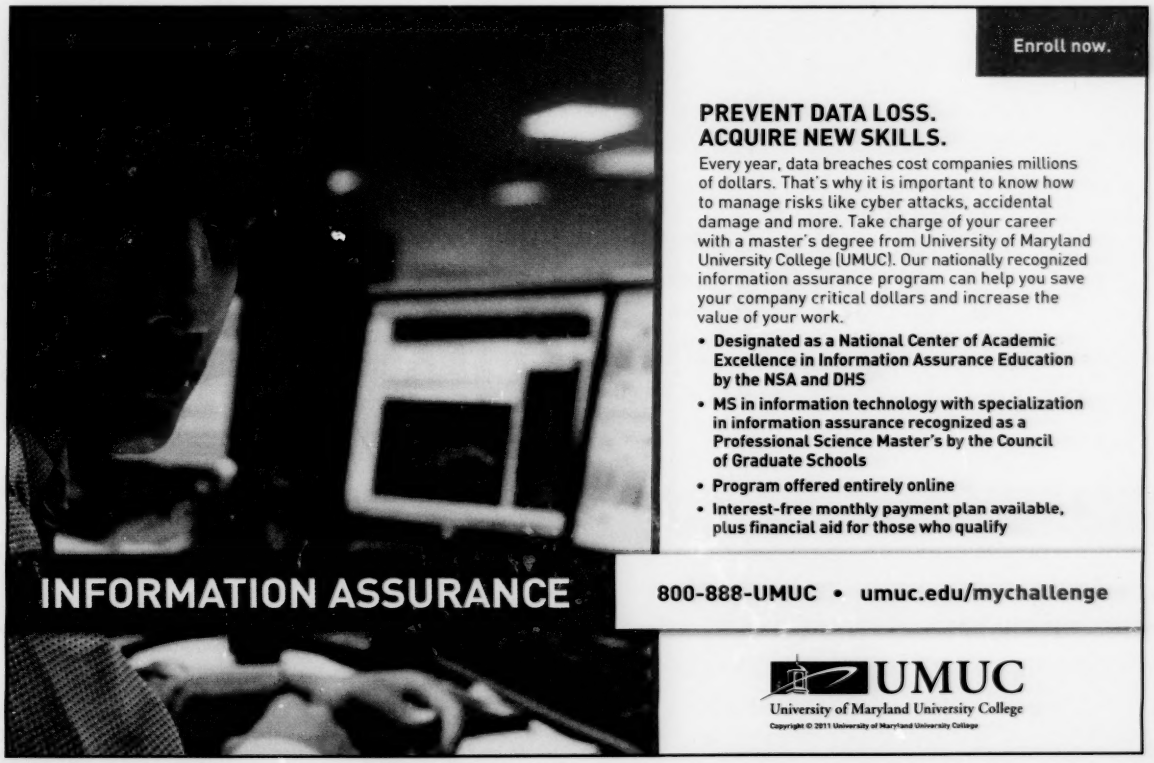
This struggle is particularly apparent in healthcare, where organizations with flat budgets are called upon to balance regulatory mandates, new clinical and patient safety standards, government incentives for use of electronic health records (EHR), demands for efficiency improvements and other strategic initiatives.

"Within healthcare, reducing costs is a common theme," says Sue Schade, vice president and CIO at Brigham and Women's Hospital in Boston, who expects to see a slight increase in her budget in 2012. "At the same time, you can talk to any healthcare CIO in the country, and they'll tell you they're working on [Meaningful Use] and ICD-10," a new coding scheme for providing health services, as well as other new initiatives.

At Brigham and Women's, the IT organization is transitioning to voice over IP, extending its core applications to remote workers and improving desktop performance. The goal is to reduce costs, boost usability, integrate patient data and improve overall effectiveness. "As healthcare organizations become accountable care organizations under health reform, we cannot afford to have disparate clinical systems, and we need to do a better job of providing a seamless experience for patients and clinicians as they move through our various care locations," Schade says.

Clearly, while modest technology spending will likely characterize 2012, the focus will be on IT delivering competitive advantage and not suffering Draconian cost cuts. "There's a higher level of expectation on the IT organization," Guibord says. "We're getting to the point where the business is expecting them to come up with more elaborate ideas than in the past. Rather than cutting costs in IT, they are investing in IT so they can reduce costs in other places, improve the business and create competitive advantage." ◆

Brandel *is a* Computerworld *contributing writer. You can contact her at marybrandel@verizon.net.*


Enroll now.
PREVENT DATA LOSS.
ACQUIRE NEW SKILLS.
Every year, data breaches cost companies millions of dollars. That's why it is important to know how to manage risks like cyber attacks, accidental damage and more. Take charge of your career with a master's degree from University of Maryland University College (UMUC). Our nationally recognized information assurance program can help you save your company critical dollars and increase the value of your work.
• Designated as a National Center of Academic Excellence in Information Assurance Education by the NSA and DHS
• MS in information technology with specialization in information assurance recognized as a Professional Science Master's by the Council of Graduate Schools
• Program offered entirely online
• Interest-free monthly payment plan available, plus financial aid for those who qualify
INFORMATION ASSURANCE
800-888-UMUC • umuc.edu/mychallenge
UMUC
University of Maryland University College
Copyright © 2011 University of Maryland University College

IT Juggles Its SOCIAL MEDIA Roles

Social media used to be solely a marketing task. But now that its use is expanding, does IT play implementer, cop, manager or all of the above?

BY MICHAEL FITZGERALD

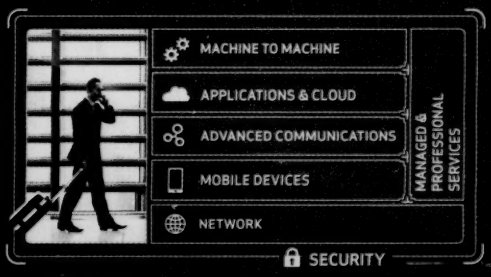
WHEN A LATE ARRIVAL thought he'd catch up on the buzz at a recent conference of CIOs, he logged in to Twitter. What he found — or rather, didn't find — amazed him.

"I couldn't find a single tweet about what was happening at the conference that morning — 300 CIOs in a room and not a single one using Twitter," recalls Paul Gillin, founder of Paul Gillin Com-

Continued on page 24

GETTY IMAGES / MARK HOOPER

KEEP YOUR PEOPLE AND BUSINESS MOVING.



To keep your enterprise on top, you need powerful IT, security, networking, mobility and communications solutions. The right technology can raise productivity, reduce risk, increase agility and sustain growth. That's where Verizon comes in. We offer a mix of technology, reliability, global solutions and strategic partnerships that no one else can. So your business can maximize opportunities and own your market.

verizonwireless.com/enterprise

verizon

Network details & coverage maps at **vzw.com**. © 2011 Verizon Wireless.

Continued from page 22

munications, a social media consultancy in Framingham, Mass. Gillin, who's a former *Computerworld* editor in chief, was at a 2010 conference being held by a vendor he didn't want to name.

Though he acknowledges that social media tools are used predominately for marketing, the lack of Twitter activity among a group of CIOs "didn't make sense to me," Gillin says. "When a new technology comes into use, it is IT's responsibility to understand it."

"Were they healthcare CIOs? We're always five to 10 years behind," says Ed Marx, CIO at Texas Health Resources in Arlington, in response to Gillin's anecdote. Marx, who calls himself a "big-time" Twitter user, says, "It's unfortunate that CIOs who really should be out there leading and experimenting and innovating are not." Marx says he started using Twitter two and a half years ago and now regularly uses Facebook, LinkedIn and an internal social media tool.

Marx aside, IT in general appears ambivalent about social media. In a 2009 survey of over 1,400 CIOs by Robert Half Technology, more than half of the respondents said their companies banned social media use by employees. Another 19% said their organizations limited social media use to business purposes only. A Manpower study based on a poll of 34,000 employers — the respondents weren't necessarily CIOs — conducted at the same time found that only 24% of U.S. companies had formal policies about social media.

Joseph Yanoska

Outside Looking In

"I don't see IT taking the function over," says Joseph Yanoska, vice president of technology at American Greetings Interactive in Cleveland. He thinks marketing should control the technology, since "it's ultimately a tool to help the relationship with customers."

But Gillin doesn't think that means IT should be less involved than it was when, for instance, companies began adopting ERP systems 15 years ago. "IT was very involved in that, despite the fact that ERP was an accounting technology," he says. Social media "is the future of how companies will operate, will engage with customers. IT should have an important role in it."

5 Reasons to Sweat

Social networking does present challenges, many of which fall into IT's purview. A report issued earlier this year by ISACA, an association for IT auditors and related professionals, offered these five reasons why companies should be worried about social media:

1. Increased risk of spreading viruses and malware
2. Potential for brand hijacking
3. Risk of loss of control over corporate content
4. Unrealistic customer expectations for "Internet-speed" service
5. Possible breaches of rules and regulations

FOTOLIA / ROBERT KNESCHKE

Yanoska does want a somewhat bigger part in his company's social media discussion. He runs IT for the online unit of American Greetings, which operates AmericanGreetings.com, BlueMountain.com, eGreetings.com and greeting card sites for MSN and Yahoo. He says IT would like to use social networking tools more freely, so it could, for example, have an easy way to inform customers about new features and site maintenance.

Right now, designated non-IT gatekeepers post on the sites, and IT has to make its case for a post. "Sometimes we get it, sometimes we don't," Yanoska says. He would like more options for posting on Facebook, especially when maintenance upgrades are about to happen. "That's a really good place [to tell] customers who are really invested in the brand, 'We plan to do maintenance.' [That way] you don't get those posts, 'Hey, what's going on?' because they already know," Yanoska says.

At Texas Health, Marx went in the other direction and ratcheted down his involvement. That's because he drove the company's adoption of the technology, using Twitter for collaboration and communications, and starting Facebook fan pages, LinkedIn groups, a Twitter feed, and microsites to connect with employees and patients. He says a microsite played a crucial role in getting employees to adopt electronic health records, and encouraging them to try social media tools and become more comfortable with the technology.

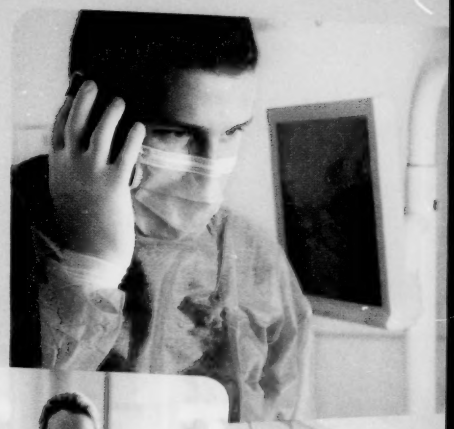
As more parts of the business got involved in social media, Texas Health created a 10-person social media steering committee. Members included the president of the hospital, Marx and the heads of marketing and communications, human resources, legal and compliance. Other groups, primarily marketing, handle day-to-day social media operations now, and Marx says this makes sense. He plays a strategic role, devising new ideas and figuring out new ways to leverage social media.

IT Gets More Involved

IT may be stepping up its involvement as social media spreads. "Our reliance on IT support is heavier now" than it was two years ago, says Jesse Redniss, vice president of digital at NBC Universal/USA Network. Redniss' group not only helps market content and shows, but also runs a thriving casual gaming business, with its own profit and loss statement.

NBC Universal adopted a setup in which IT operates infrastructure and tools used across the company, including a

Continued on page 26



Moving healthcare forward

IT and communications solutions for elevated performance

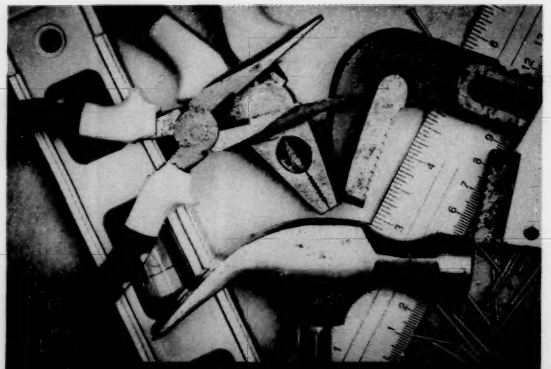
Our mission is to fulfill your vision of healthcare—in patient care and experience, in staff collaboration and communication, in business continuity and data security, and in the efficient running of your institution. With tailor-made solutions built on an in-depth understanding of your unique needs, strategies and objectives. Solutions that provide easy access to information and fast, effective communications among patients and staff—on site and at remote locations—reducing delays and improving quality of care. Learn how NEC's solutions and expertise in voice and data communications, networks and data storage can elevate your performance.

Learn how you can elevate your performance at **www.nec.com/healthcare**

Empowered by Innovation **NEC**

We didn't fully understand how much we needed [IT].

JESSE REDNISS, VICE PRESIDENT OF DIGITAL, NBC UNIVERSAL/USA NETWORK



FOTOLIA / KMIRAGAYA

IT's Toolbox

AS SOCIAL MEDIA MATURES, more tools become available for managing different aspects of it. IDC analyst Michael Fauscette says that while business units remain involved in picking these technologies, IT increasingly helps select and implement them. In addition, established enterprise applications, including Salesforce, Oracle, NetSuite and RightNow, are adding social media features. Meanwhile, social media vendors are merging or adding new features to make themselves more useful to companies. **Here are some of the main vendors in various categories of tools:**

- **Analytics:** Lithium Technologies, Radian6 (Salesforce.com), Trampoline
- **Customer service:** Attensity, Get Satisfaction
- **Loyalty programs:** Badgeville, BigDoor, Bunchball
- **Metrics/reputation management:** Hearsay, Shoutlet, SocialEye
- **Intranet-based social collaboration:** BlueKiwi, Jive, Yammer

Continued from page 24

video content management system, data-mining tools and a single-sign-on system for website visitors. The company's Digital Products and Services (DPS) unit handles department-specific IT projects.

Redniss says he used to think IT was too cumbersome to respond quickly enough to social media needs, but he now says, "We didn't fully understand how much we needed them."

Over the past couple of years, as NBC Universal has developed broad corporate efforts involving Facebook, Twitter, Tumblr and other social media sites, data management and data mining have become paramount. "We really need to figure out the right kind of funnels to build to bring everything to them so they can store it and we can sift through it," Redniss says.

But his unit will still make its own technology decisions, too. In fact, 18 months ago, Redniss recruited a DPS employee, Robin Fordham, who is now director of technology for USA Network. "I just jumped the fence," says Fordham. "Instead of USA Net being my client, I work for them directly."

Fordham leads a small team of developers that figures out how to execute Redniss' ideas. For instance, when Redniss wanted to improve customer loyalty, the group took the lead in adopting Bunchball's Nitro platform, which uses gaming to build loyalty. Fordham's unit has also done most of the work in adopting Echo's Streamserver, a commenting engine.

Leaping Aboard

Social networking has roared to the top of many corporate to-do lists. In an eMarketer survey of 227 companies with more than 100 employees, 80% of the respondents said their employers intended to use social media for marketing purposes in 2011, up from 58% in 2009.

Meanwhile, social networking is being adopted by other departments, thanks to new tools and strategies.

According to Michael Fauscette, an analyst at IDC, social media tools are spreading "across all departments." The research firm does a twice-yearly survey measuring which departments manage social media strategy and tools. When IDC first conducted the survey three and a half years ago, marketing dominated the results.

"It was by far the most prevalent department," Fauscette notes. "Now, [there's] pretty even distribution across all departments, including sales and customer service." Fauscette says social media is used internally for collaboration and idea generation, and externally for marketing and crisis response.

When it comes to managing the strategy behind social media, however, marketing still rules — it handles that responsibility at 48% of companies — and IT isn't involved at all. Corporate communications is second, cited by 29% of

the respondents as one of the departments that handles social media strategy (multiple answers were permitted). Meanwhile, 26% of the respondents named product development, 23% said customer service, and 16% cited sales.

Fauscette calls this shift a sign that the social media market is maturing. He says this means the technology will begin to become part of IT's purview. "We're starting to see IT more involved in what they should be doing: helping to find and implement the right tools, produce the tools and optimize the work."

He also notes that when social media moves out of marketing's control, "it puts you in a much better position from a business perspective to look at it in broader terms." That's what IT can come in and start to do.

IT's Role: Tool Master

For now, though, IT shows up in the integration and implementation of the tools, a role that Fauscette says makes sense. When the technology moves beyond experimenting or department-level expense charge-offs, "the CIO is in the room a lot of the time. Firms need a broader perspective," Fauscette says.

One CIO who's "in the room" is Craig Neeb, both CIO and vice president of multichannel marketing at International Speedway Corp., which runs racetracks across the country.

Craig Neeb

Neeb has been CIO at International Speedway in Daytona Beach since 2000. He added his marketing role in 2008, about a year before social media became important to the company's marketing strategy. International Speedway now uses websites for each of its dozen tracks and runs mobile marketing and social media campaigns, primarily on Facebook and Twitter. It also has a customer contact center that makes and takes phone calls and runs Web chats.

Because the company is publicly traded, having control over the marketing technology helps Neeb make sure it's in compliance with regulations, such as those spelled out in the Sarbanes-Oxley Act, and guidelines promulgated by private industry groups, such as the Payment Card Industry Data Security Standards.

Unlike American Greetings, International Speedway will let pretty much any employee post on its websites and social media sites, but first they must go through what Neeb calls "a small little training program" that takes about an hour.

Some of that open attitude is reflected in the company's management structure. "We don't do anything in functional silos," Neeb says. "Our digital strategy isn't owned by a department." It's owned by marketing and IT, with support from HR, legal and compliance, he says.

Neeb thinks that companies will have to adopt broader management of social media."I don't see how you can effectively manage any media outlet in a vacuum," he says, noting that IT brings expertise in technology for compliance, security and systems management.

IT should also increase its own use of social networking tools. While customer support organizations are embracing social media, Gartner analyst Jarod Greene says less than 1% of IT help desks use social networking to support users.

Still, as social media spreads, CIOs are hitting the "like" button more. Robert Half updated its social media survey in May; this time, only 31% of CIOs said their companies banned social media, compared with more than 50% in the earlier survey.

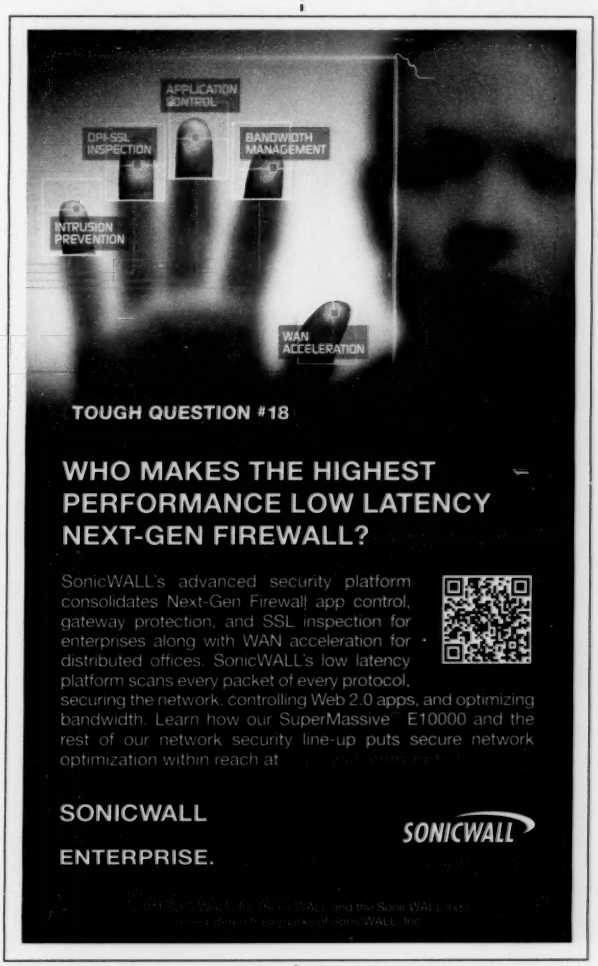
CIOs who want a seat at the social media table should use the tools in their own work and personal lives, Marx says. "If I came up and said, 'Hey, I want to be part of the social media strategy around here,' and I didn't tweet, I didn't blog, I wasn't on Facebook, I didn't use LinkedIn, I'd have no cred," he says.

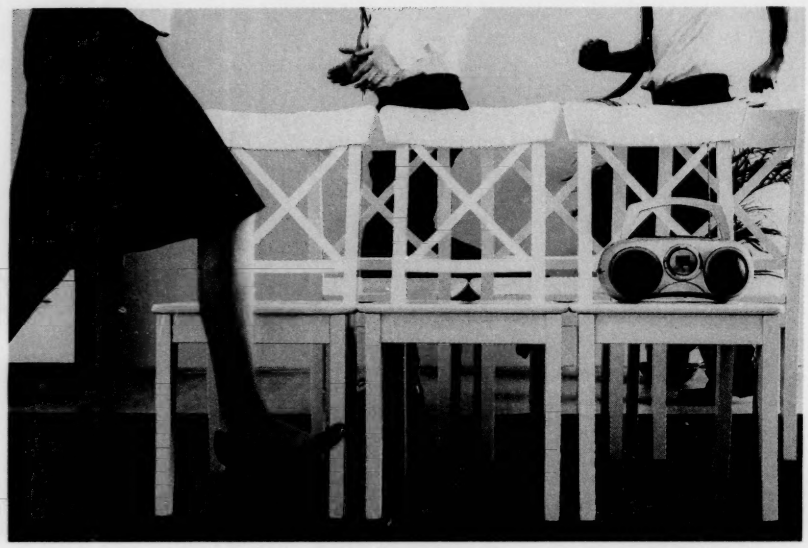
Marx says he keeps up with trends with the help of his staff. He also has two doctors who are involved in IT, and they help him stay in touch with the needs of medical professionals. In addition, he has embraced reverse-mentoring, having enlisted a twentysomething staffer to counsel him on new technology.

"CIOs can't be noobs," says Marx, meaning *newbies*.

Especially if they want to avoid being anti-social. ◆

Fitzgerald *is a freelance writer based in Cambridge, Mass.*


APPLICATION CONTROL
DPI-SSL INSPECTION
BANDWIDTH MANAGEMENT
INTRUSION PREVENTION
WAN ACCELERATION
TOUGH QUESTION #18
WHO MAKES THE HIGHEST PERFORMANCE LOW LATENCY NEXT-GEN FIREWALL?
SonicWALL's advanced security platform consolidates Next-Gen Firewall app control, gateway protection, and SSL inspection for enterprises along with WAN acceleration for distributed offices. SonicWALL's low latency platform scans every packet of every protocol, securing the network, controlling Web 2.0 apps, and optimizing bandwidth. Learn how our SuperMassive E10000 and the rest of our network security line-up puts secure network optimization within reach at
SONICWALL
ENTERPRISE.
SONICWALL



THE IT Shuffle

IT departments must constantly reshape their roles to keep pace with technology. But do IT reorgs get the results that management hopes for? **BY BOB VIOLINO**

FOR A LOT OF ENTERPRISES, frequent IT reorganizations are a fact of life. Revamping hardware, applications, processes and staff has become a hallmark of the technology function at some organizations.

The IT shuffle is likely to continue into 2012, as organizations look to get maximum benefit from their technology investments in a constantly changing business world. A key consideration for any reorganization, though, is whether it's a knee-jerk reaction to a temporary development in the market or a well-thought-out strategy to truly help the business meet its goals — with minimum disruption to operations.

Computerworld's Forecast 2012 survey shows a high level of IT reorganizations, with 39% of the 353 IT executives surveyed saying that their IT departments either had undergone reorganizations in the past 12 months or had planned one.

The most common feature of the reorganizations undertaken by the survey respondents was an effort to boost IT's flexibility to meet changing business needs: 47% of those polled said their restructurings included such initiatives. Meanwhile, 35% said their shake-ups involved IT department downsizing or layoffs, another 35% said centralizing IT operations was part of the process, 25% cited a desire to create teams of subject-matter experts, 21% said they were creating a project management office, 21% mentioned boosting the role of enterprise architects, and 18% cited outsourcing.

In the past, IT reorganizations focused on optimizing the IT unit's service delivery, says Bart Perkins, managing partner at Leverage Partners, a Washington-based IT consulting firm. Perkins says those change-ups addressed questions such as how much independence should be given to business unit IT teams, which applications IT should be allowed to develop, whether there should be a single applications organization or separate organizations for development and maintenance, and whether there should be a single infrastructure team or multiple ones organized by technology.

"Today, reorgs focus more on the integration between IT and the business," says Perkins, who is a *Computerworld* columnist. "A different organization is needed when IT is responsible for activities that are not traditionally IT functions."

Do IT reorganizations get the results that management hopes for? "IT reorgs are no different from any other type of reorg. You don't always get the results you [want]," Perkins says. "The odds are improved if the reorg is carefully planned and executed. The staff has to be told quickly, people have to be handled with dignity, particularly anyone being laid off, [and] the rationale for the new organization has to be compelling."

Paul Glen, CEO of Leading Geeks, an IT education and consulting firm in Los Angeles, says reorganizations are one of the first tools managers think of when confronting a problem. "Unfortunately, I think that the benefits are often overestimated and the costs underestimated," says Glen, who also is a *Computerworld* columnist. "If they were more accurately understood, I'm not sure that reorgs would be done so frequently."

IT executives who have lived through more than one reorganization say the experience can be challenging but add that it has its rewards if done for the right reasons.

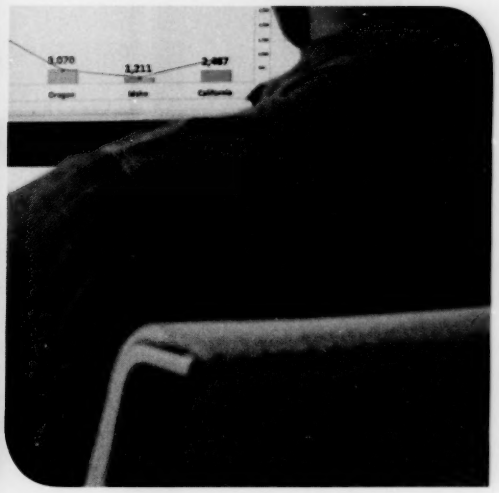
Business Alignment

About two years ago, the Franklin, Tenn., municipal government reorganized its IT department along application lines, to ensure that the applications the city was deploying were implemented and used effectively. "We created enterprise, public

Continued on page 30

GETTY IMAGES / PETER CADE

Microsoft



Meetings from a laptop.
File sharing in the cloud.
Closing deals by videoconference.
It all works together.

Introducing Microsoft Office 365. Collaborate in the cloud with Office, Exchange, SharePoint, and Lync videoconferencing. **Starting as low as $10 per user per month. Begin your free trial now at Microsoft.com/office365**

Scan tag with a smartphone to learn about the Office 365 free trial.

Download the free scanner app at http://gettag.mobi

Microsoft® Office 365

Continued from page 28

safety, [Microsoft] Office and financial manager positions to aid in the implementation and update of the various software platforms we use," says Fred Banner, IT director.

Previously, people in IT worked with a variety of applications, regardless of their specialty. As a result, there was a lack of structure and no one took ownership of and accountability for projects, Banner says.

In each application area, the city appointed application managers who are responsible for making any needed upgrades to better support end users in some 14 city departments, including municipal government, public safety, police, fire, parks and water. The managers also train others in their area on how to fully leverage the applications they work with.

By giving people more responsibility for the success of a system rollout or upgrade, the city is "making them a part of the solution," Banner says. "We're letting them make some decisions about how the hardware and software should function in their area."

The reorganization is nearly at an end, and management has deemed the strategy a success, Banner says. The next step, to be launched in July 2012, is a reorganization of IT people along business lines such as public safety and financial management. The effort involves "redefining the application managers into business units, to work with users in defining future opportunities for the city," Banner says.

The details as to who will do what under the reorganization haven't been finalized, Banner says. But the goal is to continue to support the shifting IT needs of a growing city. Franklin's population has increased from 25,000 12 years ago to 63,000 today, and it's projected to reach about 80,000 in five years.

"We're trying to keep abreast of the changes occurring in the community and address what the [businesses that relocate there] are looking for, especially as to what kinds of services we can provide for them," Banner says.

A key to success with any reorganization is letting people know why changes are being made, he says. "Early on in the reorganization, we brought the city departments together and said, 'Life as you know it is not going to be the same as yesterday, and we need your help,' " Banner says. Widespread support is important. "You must find people who are going to be the project managers, the doers and the thinkers, and you've got to get that group on board," he says.

Some IT reorganizations reflect ongoing changes in the marketplace. For example, ACP Interactive, a San Francisco-based marketing services firm, has seen its business model shift during the past 20 years as new communications technologies have been introduced.

ACP uses various technologies in the services it offers its clients, and as the technologies change, "different skill sets come into play," says Ed Skokowski, director of IT. Those changes have led to multiple IT staff shake-ups.

ACP undertook its most recent IT reorganization in response to a decrease in revenue, Skokowski says. The IT department, which once had up to 30 people in addition to part-time support staffers, has been scaled down to just two.

Skokowski has taken other steps to reduce costs, including consolidating servers, adding Linux wherever possible and migrating some functions to the cloud.

Gradual Goals

In some cases, IT reorganizations take place over extended periods of time, making them less of a jolt to those involved.

"We have been going through a gradual reorganization to make the IT organization function as a single unit," says Kim Tracy, CIO and executive director of University Technology Services at Northeastern Illinois University in Chicago. "As part of that, we created a strategy and planning department, an integrated service-delivery organization, and are working to create ITIL-like processes to help the organizations work together to deliver value to the university."

Tracy says the reorganization of the university's IT department has been much slower than other reorganizations he has been involved in. He says he thinks it's "better thought-out and hopefully more considerate of individual members of the organization." He says other reorganizations he has experienced have been due to merger and acquisition activity, divestiture or "drastic budget cuts."

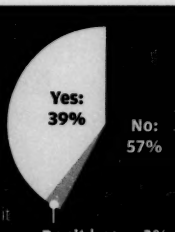
Looking at the big picture, IT executives say it's likely that IT reorganizations will always be a possibility, particularly with the constant changes in technology and business. "I really don't see an end in sight to IT reorganizations," Tracy says.

The best approach, Skokowski says, might be "more frequent reviews and adjustments to players and roles, similar to a football team changing personnel many times during a game. Companies that reorganize without a predetermined plan or just to shake things up are really gambling their future success." ◆

Violino *is a freelance writer in Massapequa Park, N.Y. You can reach him at bviolino@optonline.net.*

Ready to Reorg

Has your IT department undergone a reorganization in the past 12 months, or does it have one planned?



Adaptable IT

If yes, did (or will) the reorganization include any of the following?
(Multiple responses allowed)

Boosting IT's flexibility to meet changing business needs	47%
Downsizing/laying off IT workers	35%
Centralizing IT operations	35%
Creating teams of subject-matter experts	25%
Creating a project management office	21%
Boosting the role of enterprise architects	21%
Outsourcing	18%

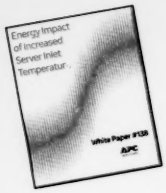
How to Contact APC™

Call: 888-289-APCC x6303

Fax: 401-788-2797

Visit: *www.apc.com/promo*
enter key code: f889v

APC
by Schneider Electric



Download FREE
White Paper #138:
"Energy Impact of
Increased Server
Inlet Temperature."

www.apc.com/promo
888-289-APCC x6303
FAX: 401-788-2797

Key Code: f889v

APC™
by Schneider Electric

BRIEFCASE

NEW APP

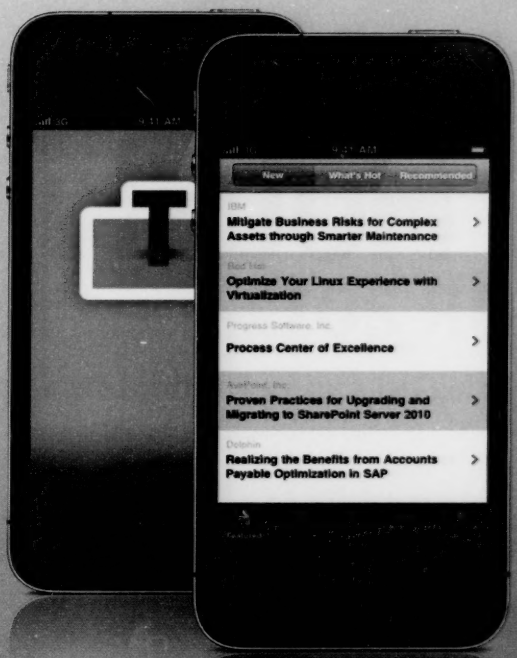
Search, store, and share IT white papers from across the web.

Search thousands of relevant IT white papers.

Organize what you find by tag or project.

Store and access them from your phone or desktop.

Share your briefcase content with colleagues and friends.



Download the Tech Briefcase app from the iTunes App Store.

Available on the App Store

9 Hot Skills FOR 2012

IT hiring ticks up for the third straight year, and IT pros with programming skills will be first in line for jobs. **BY RICK SAIA**

SLOWLY BUT SURELY, many U.S. companies are loosening their viselike grips on IT hiring and looking to add new staffers to bolster business growth in the year ahead.

That trend is reflected in *Computerworld*'s annual Forecast survey. Nearly 29% of the 353 IT executives polled said they plan to increase IT staffing through next summer. That's up from 23% in the 2010 survey and 20% in the 2009 survey. Altogether, it's a 45% increase in hiring expectations over the past two years.

"We're seeing [strong hiring] across the board," among organizations of all sizes, says Mike McBrierty, chief operations officer for the technology staffing division of Eliassen Group, an IT recruiting firm. He says there has been pent-up demand for infrastructure upgrades and investments that had been shelved over the previous three years.

The Forecast survey also revealed that IT managers may be thinking about innovation, not merely keeping the lights on, as they plan their staffs for 2012. Respondents said these nine skills will be in demand.

1 Programming and Application Development

■ *61% plan to hire for this skill in the next 12 months, up from 44% in the 2010 survey.*

This large year-over-year jump doesn't surprise people like John Reed, executive director of staffing firm Robert Half Technology, who sees demand for a variety of skills in areas ranging from website development to upgrading internal systems and meeting the needs of mobile users. "Web development continues to be very strong" as companies try to improve the user experience, he says, adding that there will also be a lot of effort to develop mobile technologies to improve customer access via smartphones.

Mobile application development is especially hot in healthcare, says Randy Bankes, associate director of IT at Lehigh Valley Health Network, a multicampus healthcare system in Allentown, Pa. Bankes says he's had a "god-awful hard time" trying to hire people with skills in mobile technologies. "It's competitive as hell right now," says Bankes.

Bill Predmore, director of enterprise application support at the Capital Metropolitan Transportation Authority in Austin, also sees growth in mobile technology, especially in the transportation industry. "There's more and more of a push to implement whiz-bang Web stuff, along with making trip planners, [bus and train] route data and schedule data presentable on mobile devices," he says.

2 Project Management

■ *44% plan to hire for this skill in the next 12 months, up from 43% in the 2010 survey.*

Big projects need managers, but they also need business analysts who can identify users' needs and translate them for the IT staffers who have to meet those needs and complete projects on time. "The demand has been more for business analysts than project managers," Reed says — in other words, those who can help deliver projects rather than merely oversee and monitor them.

That's what Sean Masters discovered when he embarked on a job search in March. "When I was framing myself as a systems, network, security or other administrator role, I was hardly getting any attention," says the IT professional from Worcester, Mass. "As soon as I shifted my résumé to list those specific technologies used in accomplishing specific projects, I was suddenly framing myself as an engineer who could not only manage systems, but also plan, design and implement them."

3 Help Desk/Technical Support

■ *35% plan to hire for this skill in the next 12 months, down from 43% in the 2010 survey.*

As long as technology is used in the workplace, there will be

Continued on page 34

FOTOLIA / BLEND IMAGES

INSPIRE
unbridled innovation with the power of convergence.
intel Xeon inside
Powerful. Intelligent.
HP Converged Infrastructure ignites what's next with HP ProLiant servers.
Get ready for a breakthrough in the way computing serves your business. With ROI in as little as 2 months,* HP ProLiant DL380 G7 servers and FlexFabric Converged Networking enabled HP ProLiant BL460c servers powered by the Intel® Xeon® processor 5600 series offer a dramatic upgrade over your old infrastructure. By utilizing new breakthroughs in management efficiency, you'll be able to maximize productivity and savings while you accelerate the pace of innovation.
Scan this QR code with your mobile device to learn how HP Insight Control can help you turbocharge productivity with the white paper Gaining Business Value and ROI with HP Insight Control Management Software, or visit hp.com/go/turbocharge16
HP ProLiant BL460c G7 server
• Two six-core Intel® Xeon® processors 5600 series (2.53GHz) installed
• 16GB of memory; expandable up to 384GB of memory
• Smart Array Controller P410i
• One integrated NC553i Dual Port 10Gb FlexFabric Converged Network Adapter
• Up to two HP hot plug small form factor SAS, SATA, or Solid State Drives
$4,199 (Save $677)
Lease for just $102 /mo
Buy (PN 630417-S01)
HP ProLiant DL380 G7 server
• One quad-core Intel® Xeon® processor 5600 series (2.40GHz)
• 6GB of memory; expandable up to 384GB of memory
• HP Smart Array P410i Controller with 512MB Flash Backed Write Cache installed
• Up to eight HP hot plug small form factor SAS or SATA drives
$2,674 (Save $542)
Lease for just $65 /mo
Buy (PN 606877-005)
*Based on HP internal tools comparing HP ProLiant DL380 G4 single-core servers to HP ProLiant G7 quad-core servers powered by the Intel® Xeon® processor 5600 series
Prices subject to terms and conditions. For further details, visit hp.com/go/turbocharge16
© Copyright 2010 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.
Intel, the Intel logo, Intel Inside, Intel Xeon, Xeon Inside and Itanium are trademarks of Intel Corporation in the U.S. and other countries.
hp

Continued from page 32

a need for support staffers, be they internal or remote. And in organizations such as Lehigh Valley Health Network, help desk and tech support are points of entry for IT professionals and places to pick up the skills that can advance them into, say, a programming or systems analyst role, says Bankes.

But mobile operating systems "have added a new dimension to help desk and tech support," says David Foote, CEO of IT staffing consultancy Foote Partners. "There are so many operating systems now that the mobile platform, and especially tablets, have quickly shoved aside the old Windows/Mac OS PC desktop axis."

4 Networking

■ *35% plan to hire for this skill in the next 12 months, down from 38% in the 2010 survey.*

Robert Half's Reed says IT professionals with networking skills continue to be in high demand and have been "for a few quarters." That demand has been fueled, in part, by virtualization and cloud computing projects. In fact, during his recent job search, Masters says he saw heavy interest in virtualization skills.

Reed says hiring managers are looking for people with "practical work experience" in the networking arena, especially if they have worked in an organization that has migrated to a virtualized or cloud-based environment. In particular, they're looking for people with VMware and Citrix experience.

As for certifications, they're important but they're "not driving the market one way or the other," he says.

5 Business Intelligence

■ *23% plan to hire for this skill in the next 12 months, up from 13% in the 2010 survey.*

Eliassen Group's McBrierty says his firm is starting to see more demand for IT professionals skilled in BI. The uptick indicates a shift from focusing on cost savings to investing in technology that provides access to real-time data, enabling better business decisions.

That may happen at Lorillard Tobacco, says Dan Clark, manager of server and desktop technology. The $6 billion company is looking to expand its use of Microsoft's SharePoint collaboration software from about 175 users to more than 2,000, he says. "This will require additional head count to develop and administer," Clark says, adding that he's especially interested in SharePoint developers.

6 Data Center

■ *18% plan to hire for this skill in the next 12 months, down from 21% in the 2010 survey.*

Like networking, data center operations will be impacted by organizations' virtualization and cloud strategies. In particular, Reed says, hiring managers will be looking for IT professionals with backgrounds in data center operations and systems integration.

In addition, the demands of having data available to achieve guaranteed IT service levels underscore the need for people who are experts in disaster recovery and business continuity, according to Bob Cuneo, CIO at Eliassen Group. Companies need to ensure that the systems that users depend on will be there when they need them, and those systems need to be backed up and replicated, he says.

7 Web 2.0

■ *18% plan to hire for this skill in the next 12 months, up from 17% in the 2010 survey.*

Technical skills centered around social media remain in demand today, as more industries look for ways to integrate Web 2.0 technologies into their infrastructures, and Reed says he expects that demand to continue in 2012. He sees .Net, AJAX and PHP as key back-end skills, with HTML, XML, CSS, Flash and Javascript, among others, on the front end. "Organizations know they need to engage their customers via online platforms, and professionals who can support these initiatives will continue to command a premium in 2012," Reed says.

8 Security

■ *17% plan to hire for this skill the next 12 months, down from 32% in the 2010 survey.*

The one-year drop may be surprising given that information security threats are a moving target, but security is a top-level concern for many organizations, especially those that are considering cloud computing as part of their IT strategies, says Reed.

Corey Peissig, senior vice president of technical operations at Mortgagebot, a Web-based mortgage software provider, says security is a top priority at his company. "Strong technical security and auditing skills are in high demand in our business," he says. "The challenge is that good talent in this arena is sometimes difficult to find."

9 Telecommunications

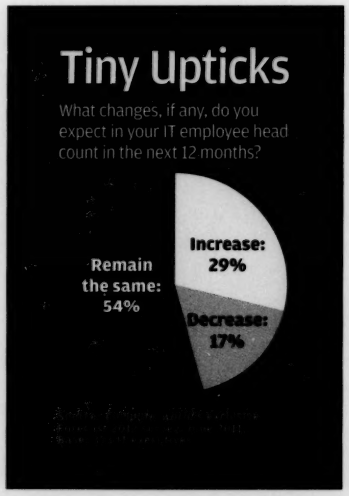
■ *9% plan to hire for this skill in the next 12 months, down from 17% in the 2010 survey.*

"We have an aggressive agenda to upgrade communications systems," with a strong need for voice-over-IP help, says Laurie Connors, a human resources official who handles IT hiring at Partners HealthCare, a Boston-based healthcare organization that includes the renowned Massachusetts General Hospital.

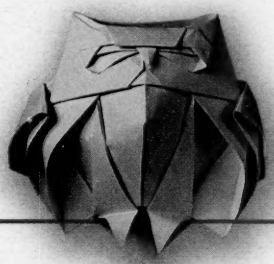
That's why Partners will be looking for telecommunications expertise in the coming year. Foote says he sees demand for people with IP telephony skills, and for those familiar with Cisco IPCC call center systems.

Although there may be some concerns about the resiliency of the U.S. economy over the next year, the three-year trend in hiring plans highlighted in *Computerworld*'s Forecast survey indicates that IT hiring budgets are expanding. "We're in a cycle now where it's more about innovation than cost savings," says Reed. "You can only create so much efficiency, [and] you can only reduce so much cost." ◆

Saia *is a freelance writer in Shrewsbury, Mass.*


Tiny Upticks
What changes, if any, do you expect in your IT employee head count in the next 12 months?
Increase: 29%
Remain the same: 54%
Decrease: 17%

"THE WISE MAN SOLVES 1,000 PROBLEMS WITH A SINGLE SOLUTION."



AchieveOneness™

Switch to single-platform Simpana® software for truly modern data and information management.

Year after year, some companies stick with legacy data protection software not designed to handle today's IT realities. The result? Business at risk, frustrated users, out-of-control costs, and compromised business agility. In a word, insanity.

With its revolutionary single-platform architecture, Simpana software enables you to solve these problems right now and far into the future. It will lower operational, labor, and infrastructure costs, streamline integration of new technologies like virtualization and cloud computing, and smooth adaptation to challenges like data center consolidation and eDiscovery requirements.

The result? Up to 50% reduction in storage-related costs, and a far simpler, saner way to manage, access, and recover business information. In a word, oneness.

To learn how you can do far more with less and add real value to your end users and your business with Simpana software, visit **AchieveOneness.com** or call 888-311-0365.

commvault
solving forward™

Backup & Recovery | **Archive** | **Virtual Server Protection** | **Information Governance** | **Deduplication** | **Disaster Recovery** | **Search**

©1999-2011 CommVault Systems, Inc. All rights reserved. CommVault, the "CV" logo, Solving Forward, Simpana, and AchieveOneness are trademarks or registered trademarks of CommVault Systems, Inc. All specifications are subject to change without notice.

OPINION

THORNTON A. MAY

The Tech Shifts That May Jostle Your 2012 Agenda

> History tells us that every time technology changes, power shifts.

PERHAPS FOR THE FIRST TIME in the history of IT, the meta-technologists — those who talk about technology (subscription research firms, futurists, pundits, journalists, academics) — are of one mind regarding what the short-term future looks like.

Just about everyone involved in the technology game concurs that on the cusp of 2012, IT executives stand at the most interesting — and risky — portion of four critically important technology learning curves: big data, social media, mobility and the cloud. Everyone recognizes that disruptive change is afoot. Here are some high-impact blind spots to avoid.

Blind Spot No. 1 is the interdependence of these four transformations. The great Argentine writer Jorge Luis Borges reminded us that "everything touches everything." Each of these four change vectors/opportunity spaces/learning curves has become a sub-industry unto itself, complete with tribal elders, preferred campfires (must-attend sub-industry events) and a unique vocabulary — some senior executives are convinced that cloud jargon transcends human comprehension. Such microspecialization may not be a good thing.

Since just about every truthful decision-maker in a position of power in the Fortune 500, the CAC 40 or the FTSE 100 admits that they "don't know enough" about these four disruptive tech vectors, the advice industry has become white-hot. There are mobility experts (Mobiquity). There are social media experts (Paul Gillin at Paul Gillin Communications). There are big data experts (SAS and Splunk). And there are cloud experts (Tim Chou at Stanford University).

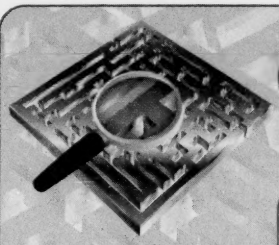
Most large enterprises have pilot projects underway to create capability along all four vectors. One major insurance company has a mobility pilot, a social media project and a cloud "experiment/lab" going. But these initiatives weren't conceived as a unified whole. They are run by separate project managers, involve different consultancies, have very different timetables and ultimately report in to different senior executives. Shouldn't all these initiatives be coordinated? Shouldn't we develop a "quad-change" expert, someone who knows what *all four* of these transformations mean combined?

Blind Spot No. 2 is the magnitude of the change associated with these transitions. History tells us that every time technology changes, power shifts. There are winners and losers. Business models change. IT skill sets change. The accepted canon and pecking order of vendors change. And IT's role and relationship with the business change. Has someone in the organization mapped out how these power shifts impact the major players and programs in the enterprise?

Blind Spot No. 3 — the elephant in the room — is whether the legal department is helping to move things along the learning curve or sniping at those who would be pioneers. In every workshop I have conducted regarding moving forward along these four critical vectors, when we come to discussing barriers, the word *legal* emerges and sucks all the innovative air out of the room.

It appears that a critical success factor for developing competence in big data, social media, mobility and the cloud is being able to render the legal department nontoxic. How do we get the lawyers to hop on the change bandwagon? Having a good and productive relationship with corporate counsel materially impacts the CIO's ability to create high-value change. ◆

Thornton A. May is author of *The New Know: Innovation Powered by Analytics* and executive director of the IT Leadership Academy at Florida State College at Jacksonville. You can contact him at thorntonamay@aol.com.



dtSearch®

The Smart Choice for Text Retrieval® since 1991

Instantly Search Terabytes of Text

Highlights hits in a wide range of data, using dtSearch's *own* file parsers and converters

- Supports MS Office through 2010 (Word, Excel, PowerPoint, Access), OpenOffice, ZIP, HTML, XML/XSL, PDF and more
- Supports Exchange, Outlook, Thunderbird and other popular email types, including nested and ZIP attachments
- Spider supports static and dynamic web data like ASP.NET, MS SharePoint, CMS, PHP, etc.
- API for SQL-type data, including BLOB data

25+ full-text and fielded data search options

- Federated searching
- Special forensics search options
- Advanced data classification objects

APIs for C++, Java and .NET through 4.x

- Native 64-bit and 32-bit Win / Linux APIs; .NET Spider API
- Content extraction only licenses available

Desktop with Spider

Network with Spider

Publish (portable media)

Web with Spider

Engine for Win & .NET

Engine for Linux

Ask about fully-functional evaluations!

With dtSearch: "Endless indexing is now a breeze"
Computerworld

"Impressive searching power ... handles more than a terabyte of text in a single index"
Network World

"Lightning fast ... performance was unmatched by any other product"
Redmond Magazine

For hundreds more reviews and developer case studies, see www.dtSearch.com

www.dtSearch.com • 1-800-IT-FINDS

Personalized IT newsletters from Tech Dispenser.

You pick the topics. You pick the sources. You pick the frequency.

Build your own newsletter featuring your favorite technology topics — cloud computing, application development, security — over 200 timely topics, from more than 700 trusted sources.

Get started today. It's free.
www.techdispenser.com

TECH DISPENSER

Distributing [illegible] newsletters

IT|careers

Computer Professionals for (Secaucus, NJ) IT firm. JR. LVL POSITIONS: Programmer Analysts, S/w Engineers, QA Analyst, Database Administrators, Systems Administrators to develop, create maintain, Test, Network & modify general comp. applications s/w or specialized utility programs, analyze user needs & develop S/w solutions. SR. LVL POSITIONS: Sr. S/w Eng, Sr. Programmer Analysts, Sr. QA Analyst, Sr. Database Administrators, Sr. Systems Administrators to maintain, administer, plan, direct, test or coordinate activities in such fields as electronic data processing, information systems, systems analysis, business analysis & comp. programming. Should be willing to travel and relocate if required. Apply w/2 copies of resume to H.R.Dept, Microexcel, Inc., One Harmon Plaza, 10th Floor, Secaucus, NJ-07094

Computer Professional firm (Uniondale NY) seeks Senior Software Engineer: Design, develop and implement the application. Involve in designing the database for the application. Test the application in various stages. Will use TIBCO, LDAP, IM, DW MQ Series, COM, ADS. eDirectory, Sun One Directory Server Secureway Servers. Should be willing to travel and relocate. Masters degree in Eng(any)CS, MIS with 1 yr of exp. as a Sr. Software Engineer or Programmer Analyst. Apply w/2 copies of resume to H.R.D, NETROVERT SOFTWARE INC, 165 EAB Plaza, Suite #658, Uniondale, NY- 11556

Scientific Computer Analyst, exp. required, to work in New Orleans, LA. SAIC Energy, Environment & Infrastructure, LLC. Go to www.saic.com. Careers. Search Jobs, My searches. Input Req. Id 209179 to view the job description. At the bottom of the job description click on "Apply to this Job". The resume will be attached to the job description for the recruiter to review.

Computers – Chegg, Inc. seeks Senior Software Engineer in Santa Clara, CA: Design simple, scalable, robust and easy to deploy integration solution leveraging Mule ESB and Active MQ. Req's: MS (or equiv.) + 2 yrs exp or alt. BS (or equiv.) + 4 yrs exp. Submit resume w/ ref. to jobs@chegg . EOE

Senior Computer Scientist, exp. required, to work in Bethesda, MD. Send resume to tolers@saic.com, SAIC, Must ref job code 208181.

EQECAT, Inc. seeks Sr. Software Engineer to develop software services and products as directed. Company headquarters is located in Oakland, CA. May telecommute; occasional travel to headquarter office required. Must have Master's + 2 yrs. exp. or Bachelor's + 5 yrs. exp. Email resumes to employment@eagle.org. Must include job code "I-11008" in the subject line and on resume.

Didn't find the IT career that you were looking for?

Check back with us weekly for fresh listings placed by top companies looking for skilled professionals like you!

IT|careers

Attention Law Firms, IT Consultants, Staffing Agencies...

Are you frequently placing legal or immigration advertisements?

Place your Labor Certification Ads Here!

Let us help you put together a cost-effective program that will make this time-consuming task a little easier.

Contact Enku Gubaie at 800.762.2977

SHARKTANK

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

HAL MAYFORTH

Data In, Data Out

Flash back to the 1960s, when punch cards are still the data-entry technology of choice where this pilot fish works. And with no air conditioning in the keypunch room, the punchers work with the windows open. "One of the keypunch operators was constantly failing to enter all the data, even though she was highly qualified," fish says. "This went on for months. The keypunch equipment was one of the earlier keypunches with tweezers that grabbed the card when done, turned it and stacked it in a bin. One day, one of the supervisors was watching this keypunch operator and caught sight of a card being moved by the tweezers. But instead of moving the card to the bin, the tweezers flipped it out the window. We found hundreds of cards between the buildings. The keypunch stacker could toss a card out the window so quickly you almost couldn't see it, even when we looked for it to happen. We closed the window and called maintenance."

Getting It Right

Call comes in to this support pilot fish from a production line at the manufacturing plant where he works: A thermal printer is down and no tags can be produced. "A long walk out to this noisy, dirty and hot area reveals a young, 'technology-oriented' production-line worker who insisted on fixing it," reports fish. "He has both his hands inside a very expensive thermal printer." After 10 minutes of watching, fish gently nudges the guy out of the way, and a quick examination shows the problem: The printer has a dozen rollers for thermal and tag paper, and it can be configured for many different scenarios. Not surprisingly, somewhere along the line, someone has changed the way the papers feed. After a few painstaking minutes to get the feed right, production is back online – and fish's work is done. Well, almost. Employee: "That's not how we normally do it." Fish: This is the correct way. Notice how it works now? Employee: "I don't know – I'll check with the supervisor."

Forever, Defined

This big software project is already over budget when the business-side guys ask the development team for yet another feature tweak, reports a pilot fish on the scene. "When asked how long the change would take to implement, one of the lead developers, just slightly exasperated, replied with a wave of his hand, 'That's going to take forever!' 'No, really,' I replied, 'how long will this take?' After a bit of thought, the developer said, 'About 14 person-hours.' He was engaged to be married. We all promised to warn his future wife that vows to forever love, honor and cherish really meant about 14 hours."

» **Sharky's waiting** for your true tale of IT life at sharky@computerworld.com. You'll get a stylish Shark shirt if I use it.

CHECK OUT Sharky's blog, browse the Sharkives and sign up for home delivery at **computerworld.com/sharky**.

ADVERTISERS' INDEX

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

APC 11
CDW C2
CenturyLink 7
CommVault 35
dtSearch 37
Eset 15
Hewlett-Packard ... 13, 33
IBM Non-Intel 3
IBM Intel C3
Microsoft Corp. 29
Motorola 5
NEC 25
PwC 19
SonicWALL 27
Splunk 9
University of Maryland 21
Verisign C4
Verizon Wireless 23

BPA WORLDWIDE

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement PM40063731. **CANADIAN POSTMASTER:** Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published twice monthly except for the month of July by Computerworld Inc., 492 Old Connecticut Path, Box 9171, Framingham, Mass. 01701-9171.

Copyright 2011 by Computerworld Inc. All rights reserved.

Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department.

Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 500 copies) and permission to reprint may be purchased from The YGS Group, (800) 290-5460, Ext. 100. Email: computerworld@theygsgroup.com. Requests for missing issues will be honored only if received within 60 days of issue date.

Subscription rates: $5 per copy; Annual subscription rates: – $129; Canada – $129; Central & So. America – $250; Europe – $295; all other countries – $295; digital subscription – $29. Subscriptions call toll-free (888) 559-7327.

POSTMASTER: Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500.

OPINION

JOHN HALAMKA

Coping With IT Decision Fatigue

WE'RE ALL SUFFERING FROM INFORMATION OVERLOAD. More projects with smaller staffs and shorter time frames mean more emails, texts, blogs, online meetings and phone calls. We make more decisions and have more accountability than ever before.

At the end of every day, my brain is whirring with thousands of inputs and hundreds of decisions made.

Regulatory complexity and the need for risk management have increased. We're pressured to make decisions faster, with little room for mistakes. In a high-stakes environment like IT, this can lead to decision fatigue — that numbness you feel at the end of an overloaded day, after you've decided how much to spend, whom to hire and what to do, over and over. I believe decision fatigue is an escalating threat to our ability to manage events of the day and keep our lives balanced.

In my early career as a leader in the 1980s, there was no email, no overnight shipping and a limited number of fax machines. An issue was escalated by writing a letter. But in the time that it took to compose, type, mail and deliver a letter, many problems ended up solving themselves. Since the effort to escalate was significant, most problems were never escalated.

Today, anyone can escalate anything to anyone. The barrier to communicating is nearly zero, and communication is done in real time. There is no mailroom or concentrated middle-management filter between you and the CEO.

This creates an interesting conundrum for leaders. Should everything be addressed in a very timely way, with Solomon-like decisions about every issue? Should everything be ignored unless it's truly urgent, with the hope that someone else will solve the problem? Should everything be deflected to those in middle management who would have read paper-based mail?

My goal is to never be the rate-limiting step. So I make hundreds of decisions every day. Some are right, some wrong, but they are the best answers, given the information that I have. In the IT industry, timely action that is good enough is often more important than a delayed perfect action.

Thus, at the end of every day, my brain is whirring with thousands of inputs and hundreds of decisions made. Though not physically tired after any workday, I may feel mentally exhausted.

The problem with decision fatigue is that the quality of decisions can diminish as the quantity of issues increases.

There are two ways to address decision fatigue:

1. *Reduce the scope of your authority and hence the decisions you need to make and the risks you need to manage.*

2. *Spread decisions over a wider group, reducing the volume of decisions that fall to any one person.*

I've gone with No. 2, but it requires having a great boss who is supportive, responsive and willing to share decision-making risk with you. It also calls for great staff members who can be empowered to make decisions on their own.

Thus, I make the decisions that I am uniquely qualified to make, while pushing others up or down the organizational hierarchy so that risk is mitigated (seeking approval up the org chart) and trusted staffers are given the resources and authority to solve problems independently (delegating down the org chart).

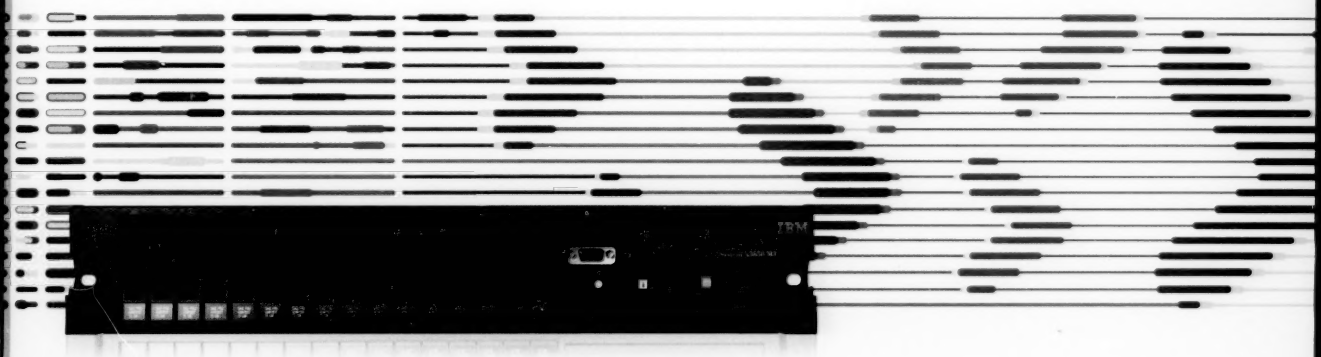
One other cure for decision fatigue is a "time-out." On your way home, stop at a local park, beach or trail. Leave the BlackBerry in the car. The decision fatigue will pass, and when you get home, you can make bold decisions about your dinner menu. ◆

John Halamka is CIO at CareGroup Healthcare System, CIO and associate dean for educational technology at Harvard Medical School, chairman of the New England Health Electronic Data Interchange Network, chairman of the Healthcare Information Technology Standards Panel and a practicing emergency physician. You can contact him at jhalamka@caregroup.harvard.edu.

Power, performance and trusted experience. Precisely what you need.

The IBM System x3650 M3 Express® server with the latest Intel® Xeon® processor 5600 series can help increase productivity and minimize costs. Featuring a 55% increase in processing power,[1] you'll be able to drive business results faster and can achieve a return on your investment in up to three months.[2] Furthermore, with the valuable expertise of IBM Business Partners, you can create an IT environment optimized to keep pace with your growing business.

Rated No. 1 in Server Customer Satisfaction by TBR for the 6th consecutive quarter.[3]



IBM System x3650 M3 Express

$2,799

OR $72/MONTH FOR 36 MONTHS[4]

PN: 7945-E6U

- Outstanding performance for most business applications
- Unprecedented low price point
- Readily available inventory—stocked in the channel

IBM System x3400 M3 Express

$1,699

OR $44/MONTH FOR 36 MONTHS[4]

PN: 7379-E5U

- Ideal tower server for small/midsized and distributed businesses
- Optimum performance and processing capability at a low cost
- Readily available inventory—stocked in the channel

IBM System Storage® DS3500 Express

$5,499

OR $141/MONTH FOR 36 MONTHS[4]

PN: 1746-A2S

- External SAS switch support
- 10 GB iSCSI
- Expands to 192 drives per system

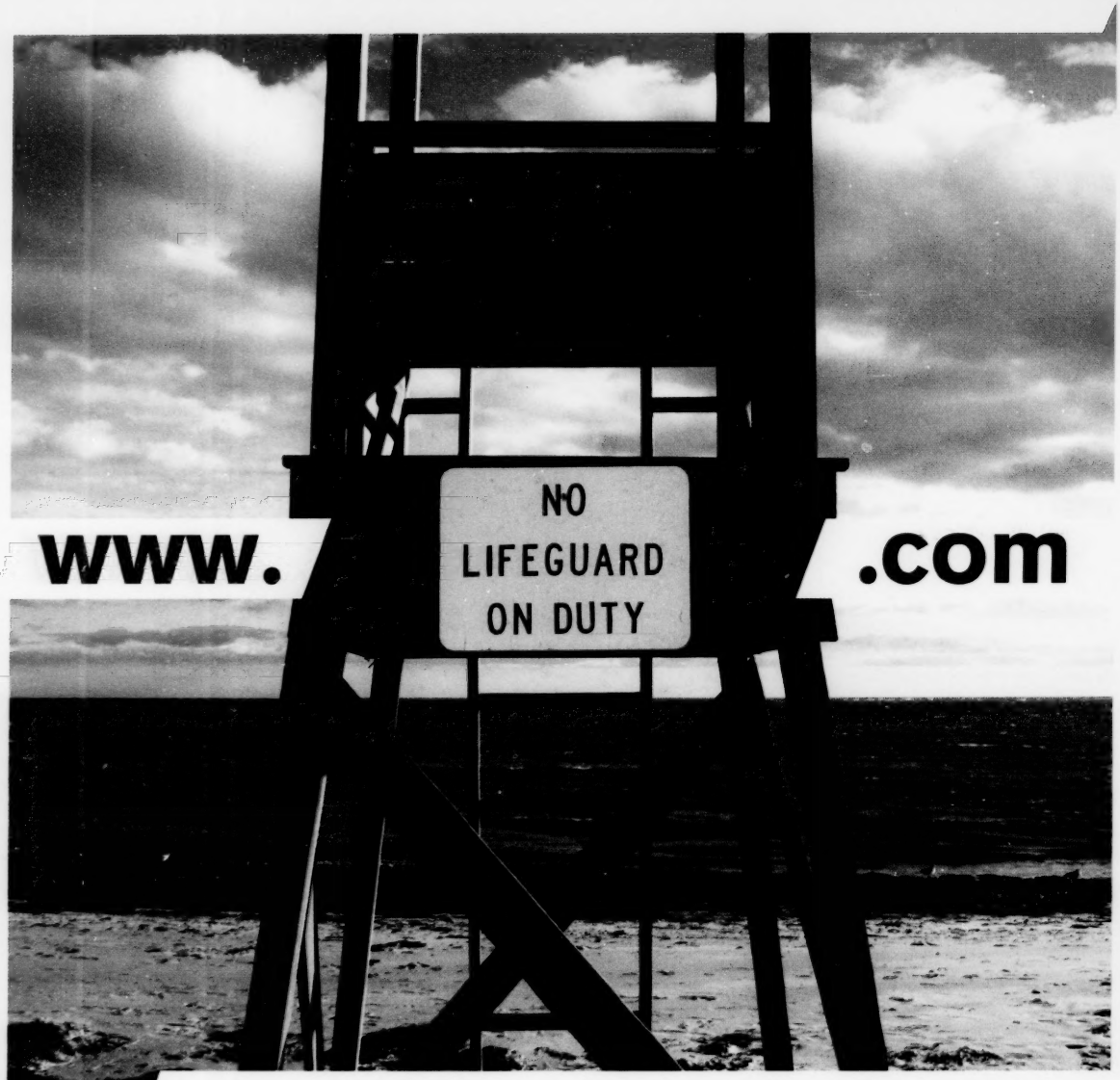
Get the whitepaper
See how IBM consistently meets high customer expectations.
ibm.com/systems/satisfaction

Contact the IBM Concierge to help you connect to the right IBM Business Partner.
1 866-872-3902 (mention 601BB27W)
Or Search x3650m3

intel Xeon inside

Powerful. Intelligent.

[1]x3650 M3: 931,658 SPECjbb2005 bops 155,276 bops/JVM; Intel Xeon X5690 2 chips/12 cores. x3650 M2: 598,924 SPECjbb2005 bops 149,731 bops/JVM; Intel Xeon X5570 2 chips/8 cores. Results as of 4/5/11. http://www.spec.org/jbb2005/results. SPEC and SPECjbb are registered trademarks of Standard Performance Evaluation Corporation (SPEC). [2]Based on comparing previous generation, 200 servers IBM eServer xSeries 346 (3.0GHz) (2Chr/2Co) to new generation 10 servers IBM x3550 M3 (Xeon E5650) 2.66GHz (2x6) using the IBM Consolidation Evaluation tool. [3]TBR 4Q10 x86-Based Servers: Corporate IT Buying Behavior and Customer Satisfaction Study, February 2011. [4]Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Monthly payments provided are for planning purposes only and may vary based on your credit and other factors. Lease offer provided is based on an FMV lease of 36 monthly payments. Other restrictions may apply. Rates and offerings are subject to change, extension or withdrawal without notice. IBM hardware products are manufactured from new parts or new and serviceable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, visit http://www.ibm.com/servers/support/machine_warranties. IBM makes no representation or warranty regarding third-party products or services. IBM, the IBM logo, System Storage and System x are registered trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. For a current list of IBM trademarks, see www.ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks of Intel Corporation in the U.S. and other countries. All other products may be trademarks or registered trademarks of their respective companies. All prices and savings estimates are subject to change without notice, may vary according to configuration, are based upon IBM's estimated retail selling prices as of 04/29/11 and may not include storage, hard drive, operating system or other features. Reseller prices and savings to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. Contact your IBM representative or IBM Business Partner for the most current pricing in your geographic area. ©2011 IBM Corporation. All rights reserved.



WHO'S WATCHING YOUR BUSINESS BETWEEN THE DOTS?

As your business increasingly depends on your network, keeping it safe and available is vital. As the Internet infrastructure company trusted to run .com and .net for more than a decade, Verisign can offer you that confidence with Verisign® DDoS Protection Services. This cloud-based solution continuously monitors and protects your sites, helping to mitigate large-scale distributed denial-of-service (DDoS) attacks. Discover how our industry-leading technology, Internet scale, and DDoS expertise can help keep your business connected between the dots.

Download the "DDoS Getting the Attention It Deserves" white paper and keep your site connecting to customers at **VerisignInc.com/guard**.

VERISIGN™

© 2011 VeriSign, Inc. All rights reserved. VERISIGN, the Verisign logo, and other trademarks, service marks, and Verisign designs are registered or unregistered trademarks of VeriSign, Inc., and its subsidiaries in the United States and in foreign countries. All other trademarks are property of their respective owners.